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केंद्रीय भूमि जल बोर्ड
भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास और गंगा संरक्षण विभाग

CENTRAL GROUND WATER BOARD
Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation

AQUIFER MAPS AND GROUND WATER
MANAGEMENT PLAN
SANGLI DISTRICT, MAHARASHTRA
AAP 2021-22

मध्यक्षेत्र, नागपुर / Central Region, Nagpur
2022

**AQUIFER MAPS AND GROUND WATER MANAGEMENT PLAN,
SANGLI DISTRICT, MAHARASHTRA
(AAP 2021-22)
CONTRIBUTORS**

Principal Authors		
Sh. Sandeep D Waghmare	:	Scientist-B (Hydrogeology)
Supervision & Guidance		
Sh. N. Varadaraj	:	Regional Director
Dr. P. K. Jain	:	Regional Director (Retd)
Anu Radha Bhatia	:	Senior Hydrogeologist/ Scientist-D (Retd)
Sh. Kartik Dongre	:	Senior Hydrogeologist/ Scientist-D
Dr.J.Davithuraj	:	Scientist-C & Office In-charge
Hydrogeology, GIS maps and Management Plan		
Smt. Nelofar	:	Scientist-B (Hydrogeology)
Sh. Sandeep D Waghmare	:	Scientist-B (Hydrogeology)
Sh Sandesh Bhange	:	Young Professional
Groundwater Exploration		
Sh. Sandeep D Waghmare	:	Scientist-B (Hydrogeology)
Sh. Ram Kishor	:	Assistant Hydrogeologist
Chemical Analysis		
Dr. Devsharan Verma	:	Scientist B (Chemist)
Dr. Rajni Kant Sharma	:	Scientist B (Chemist)

SANGLI DISTRICT AT A GLANCE

1. GENERAL INFORMATION		
	Geographical Area	: 8572 Sq. Km
	Administrative Divisions	: Shirala, Walwa, Palus, Khanapur, Atpadi, Tasgaon Miraj, Kavathe Mahakal, Jath, & Khadgaon
	Villages	: 728
	Population	: 28, 22,143
	Rainfall 2021	: 801.9 mm
	Average Annual Rainfall (1998-2021)	: 629.1 mm
	Normal rainfall (1998-2021)	: 737.2 mm
	Long term rainfall Trend (1998-2021)	: 6.86 mm/year
2. GEOMORPHOLOGY		
	Major Physiographic unit	: Hills and Ghat, Foot hill, Plateau, Plains
	Major Drainage	: Krishna River; major tributaries of the Krishna River are namely Morna, Yerala, Manganga, Agrani, Nanni and Bor and Warna River
3. LAND USE (sources: mahasdb.maharashtra.gov.in/district Report)		
	Forest Area	: 475.93 Sq. Km.
	Net Area Sown	: 5977Sq. Km.
	Cultivable Area	: 768.68Sq. Km.
4.	SOIL TYPE	: Medium black to deep black soil and Lateritic soil
5. PRINCIPAL CROPS		
	Jawar	: 123700 ha
	Wheat	: 28600 ha
	Cereal	: 97003 ha
	Sugarcane	: 51016 ha
6. IRRIGATION BY DIFFERENT SOURCES – Nos. / Potential Created (ha)		
	Dugwells	: 54064/101958
	Borewells	: 246/369
	Other Minor Surface Sources	: 2842/ 41810
	Net Irrigated Area	: 144137
7. GROUND WATER MONITORING WELLS (2022)		
	Dugwells	: 40
	Piezometers	: Nil
8. GEOLOGY		
	Recent	: Alluvium
	Upper Cretaceous-Lower Eocene	: Basalt (Deccan Traps)
9. HYDROGEOLOGY		
	Water Bearing Formation	: Alluvium- Sand, silt and gravel

		Basalt (Deccan Traps) -Weathered, Fractured, Jointed.
	Premonsoon Depth to Water Level (2021)	: 0.30 to 15.50 mbgl
	Postmonsoon Depth to Water Level (2021)	: 0.20 to 12.20 mbgl
	Premonsoon Water Level Trend	: Rise: 0.102727 to 0.173557m/year Fall: 0.003846 to 0.689091 m/year
	Postmonsoon Water Level Trend	: Rise: 0.067824 to 0.162037m/year Fall: 0.001188 to 0.627285 m/year
10. GROUND WATER EXPLORATION (As on March, 2022)		
	Wells Drilled	: EW-55, OW-08
	Depth Range	: 95 to 200 mbgl
	Discharge	: Traces – 10.98 lps
	Storativity	: 1.2×10^{-3} to 3.57×10^{-3}
	Transmissivity	: 5.0 to 180 m ² /day
11. GROUND WATER QUALITY		
	Good and suitable for drinking and irrigation purpose, except the high EC and TDS affected locations for drinking purpose.	
12. DYNAMIC GROUND WATER RESOURCES- (2020)		
	Annual Extractable Groundwater Resource (MCM)	: 1304.60 (MCM)
	Total Draft (Irrigation + Domestic+ Industrial)	: 725.65 (MCM)
	Projected Demand (Domestic + Industrial)	: 32.70 (MCM)
11	Stage of Ground Water Extraction	: 55.62 %
	Overall Category	Safe
16. MAJOR GROUND WATER PROBLEMS AND ISSUES		
	Sangli district receives low rain fall as it falls in Rain Shadow Zone (dry area on the lee side of mountains). The mountains block the passage of rain-producing weather systems casting a “shadow” of dryness behind them. The drought is observed in major part of the district. High concentration of Nitrate and Floride in in parts of Kavthe Mahankal, Jath, Khanapur and Miraj talukas. As per GEC-2020 Kavathe Mahakal taluka have been categorised as “semi-critical” where the ground water development has reached more than 70%. Major parts showing decline in water level in premonsoon and postmonsoon period.	

AQUIFER MAPS AND GROUND WATER MANAGEMENT PLAN, SANGLI DISTRICT, MAHARASHTRA

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AQUIFER MAPS AND GROUND WATER MANAGEMENT PLAN, SANGLI DISTRICT, MAHARASHTRA

1. INTRODUCTION

National Aquifer Mapping (NAQUIM) has been taken up in XII five-year plans by CGWB to carry out detailed hydrogeological investigation on toposheet scale of 1:50,000. The NAQUIM has been prioritized to study Over-exploited, Critical and Semi-Critical Blocks as well as the other stress areas recommended by the State Govt. Aquifer mapping is a process wherein a combination of geological, geophysical, hydrological and chemical analyses is applied to characterize the quantity, quality and sustainability of ground water in aquifers.

The vagaries of rainfall, inherent heterogeneity & unsustainable nature of basalt aquifers, over exploitation of once copious alluvial aquifers, lack of regulation mechanism has a detrimental effect on ground water scenario of the Country in last decade or so. Thus, prompting the paradigm shift from “traditional groundwater development concept” to “modern groundwater management concept”.

Varied and diverse hydrogeological settings demand precise and comprehensive mapping of aquifers down to the optimum possible depth at appropriate scale to arrive at the robust and implementable ground water management plans. The proposed management plans will provide the “Road Map” for ensuring sustainable management and equitable distribution of ground water resources, thereby primarily improving drinking water security and irrigation coverage. Thus, the crux of NAQUIM is not merely mapping, but reaching the goal-that of ground water management through community participation. The aquifer maps and management plans will be shared with the Administration of Sangli district, Maharashtra for its effective implementation.

The activities under NAQUIM are aimed at:

- ❖ Identifying the aquifer geometry,
- ❖ Aquifer characteristics and their yield potential
- ❖ Quality of water occurring at various depths,
- ❖ Aquifer wise assessment of ground water resources
- ❖ Preparation of aquifer maps and
- ❖ Formulate ground water management plan

1.1 About the Area

Sangli district is one of the thirty-six districts of Maharashtra State. It is situated in the Southern part of the State adjoining Karnataka and lies between north latitudes 16⁰43' and 17⁰38' and east longitude 73⁰41' and 75⁰41' having an area of 8572 sq. km covering parts of survey of India degree sheet Nos 47 K,47 L,47 O and 47P.

The district is bounded by Satara and Solapur districts in north and Kolhapur and Belgaum districts (Karnataka) in south. On the east it is bounded by Bijapur district of Karnataka state and in the west by coastal district of Ratnagiri. The east west extent of district is 205 km and the extent along north south is 96 km.

The district headquarters is located at Sangli city. It comprises of 10 talukas viz Shirala, Walwa, Palus, Khanapur, Atpadi, Jath, Kadegaon, Tasgaon, Miraj and Kavathe Mahakal. There are 8 towns and 728 villages in the district out of which only 3 villages are not habited. The

district has 1 Municipal Corporation, 4 Municipalities, 10 Panchayat Samities and 705 Gram Panchayats. The district is mainly an agricultural district falling in Krishna River basin. The Industrial development in the district is mainly restricted to Sangli-Miraj-Madhawagar urban complex; however, the district is devoid of major industries except few agro based industries.

Sangli district has been taken up under NAQUIM study during the year 2021-22. The total area of the district is 8572 km. The Kavthe mahankal Block is categorised as Semi-critical and rest of the Blocks are categorized as safe as per Ground Water Resources Estimation as on March 2020. The Administrative and Index map of the study area is presented in **Figure.1.1 (a&b)**.

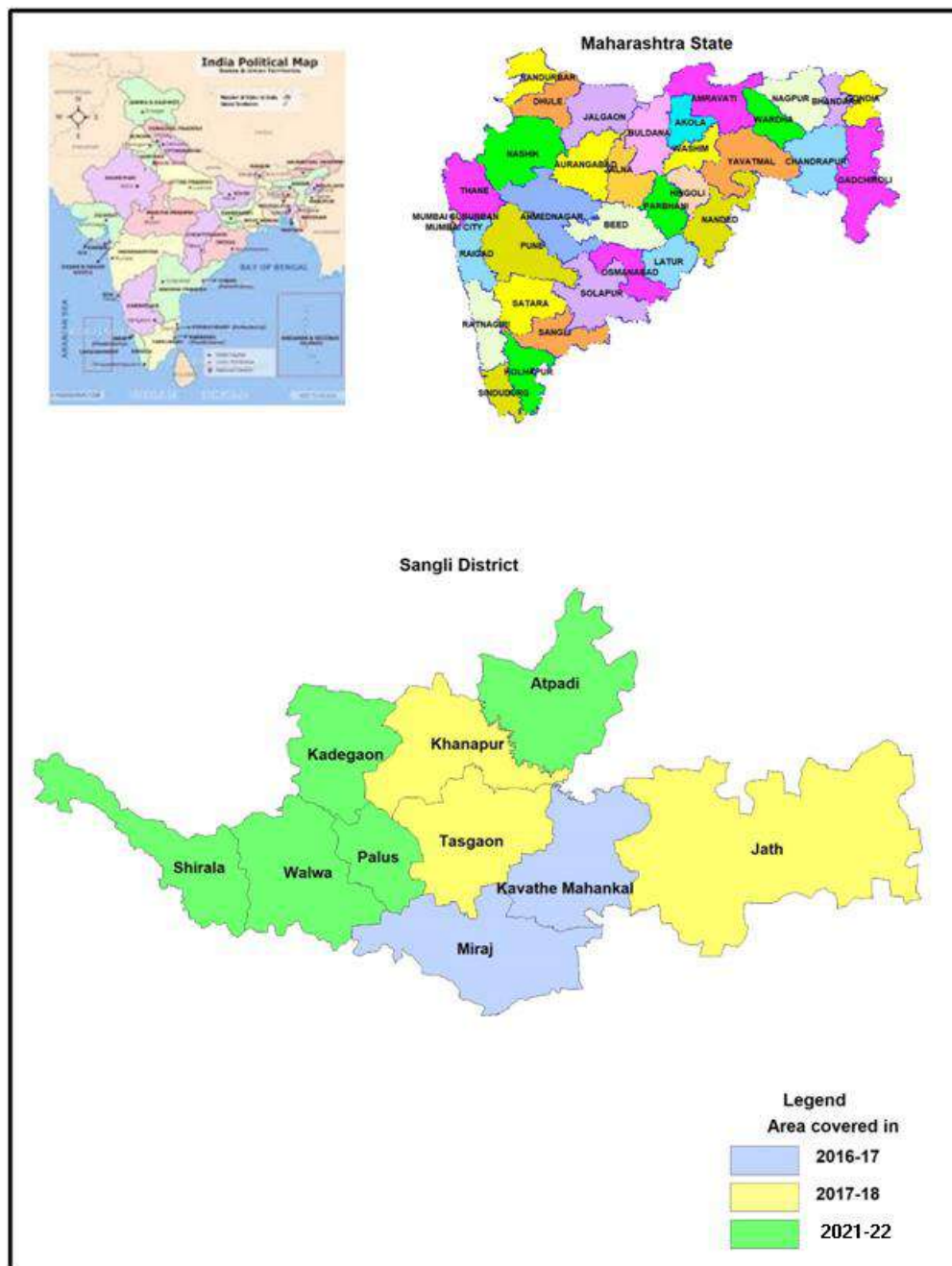


Figure.1.1 (a) Index Map, Sangli District

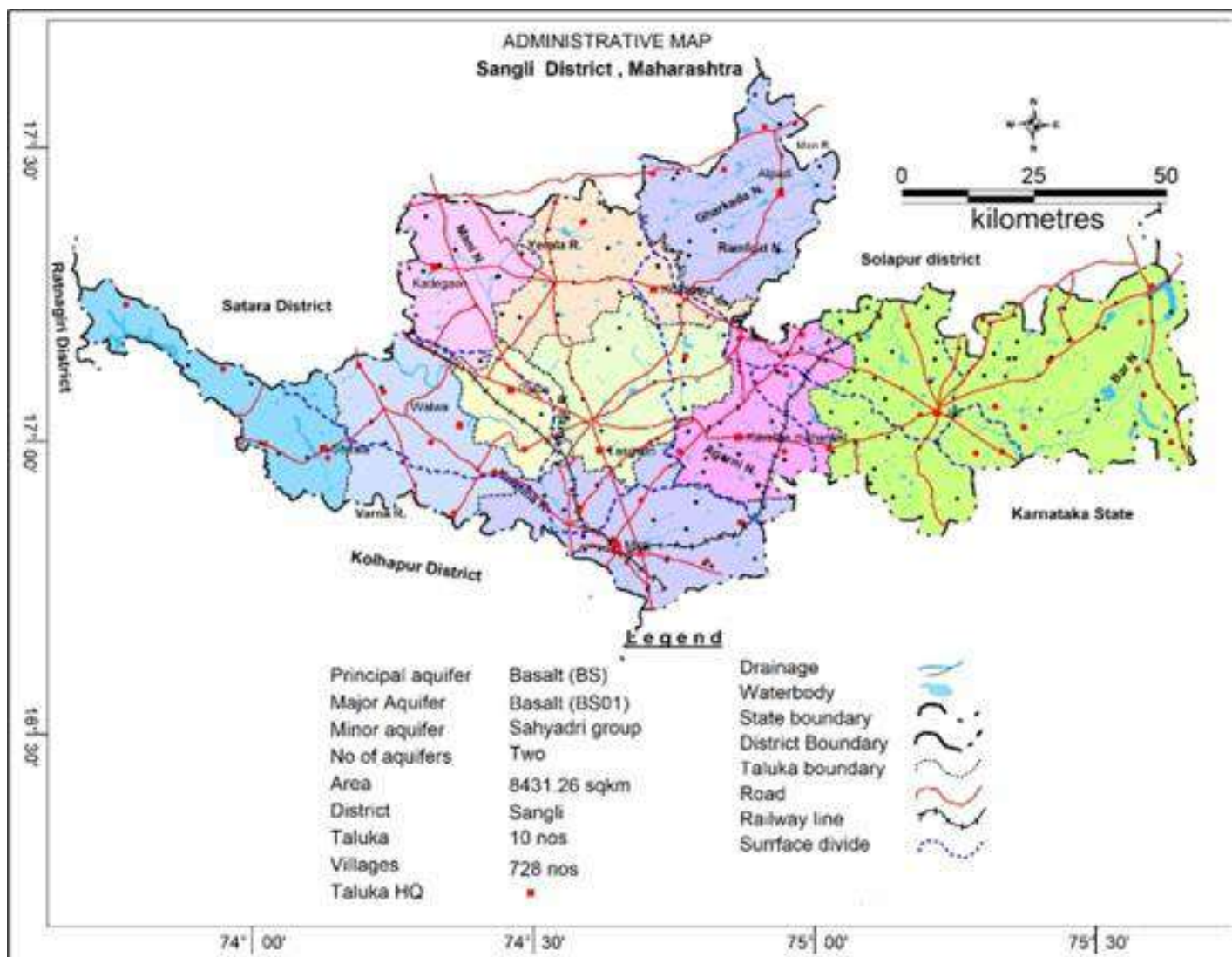


Figure 1.1 (b): Administrative map, Sangli District

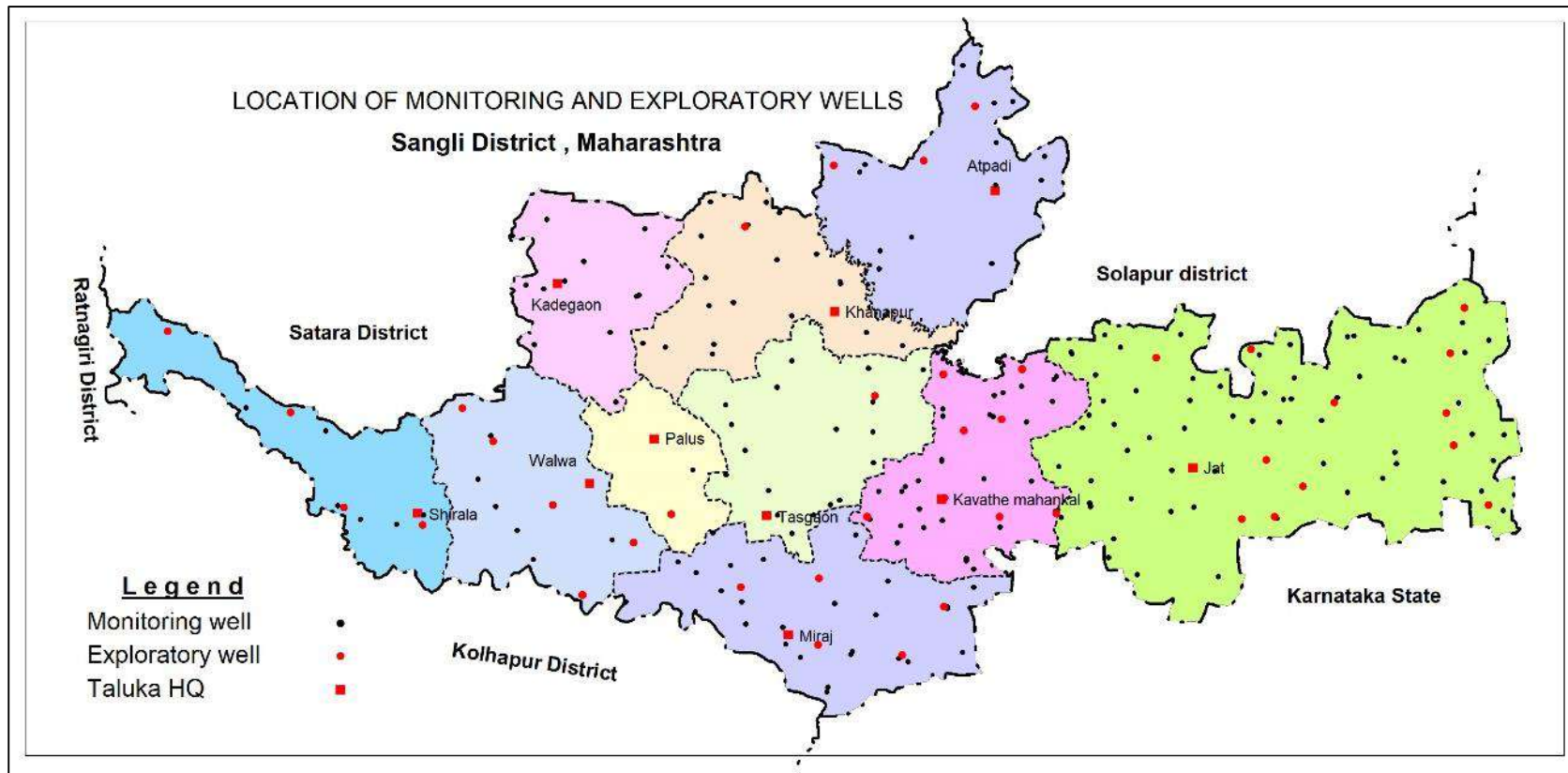


Fig. 1.2 : Locations of Existing Exploratory wells and Ground Water Monitoring Wells

Ground water exploratory drilling in the district has been taken up in different phases since 1957. To establish the aquifer geometry, disposition and potential of aquifers, ground water exploration down to the depth of 200 m bgl has been taken up where the data gap exists and accordingly exploratory wells and observation wells have been constructed during 2021-22. Salient Features of Ground Water Exploration are given in **Annexure –I**, Location of Exploratory wells and monitoring wells is presented in **fig 1.2**.

1.2 Geomorphology, Geology, Drainage and Soil Types

The district falls in Krishna basin and has undulating topography. The elevation in the district ranges between 476 and 1104 a msl. The district is located in the Deccan Plateau and extends west to east from Western Ghat section in Shirala taluka to relatively flatter area of eastern Jath taluka. The land forms present are erosional broad valley separating flat topped remnant hills, displaying characteristic step like appearance. The area of the district can be broadly divided into four physiographic units namely,

- I) Highly dissected Plateau
- II) Moderately dissected Plateau
- III) Pediplain
- IV) Lateritic Uplands

The Highly dissected Plateau form the ridges and spurs of the Western Ghats and extend through western parts of Shirala taluka North western part of Yerala and Tasgaon

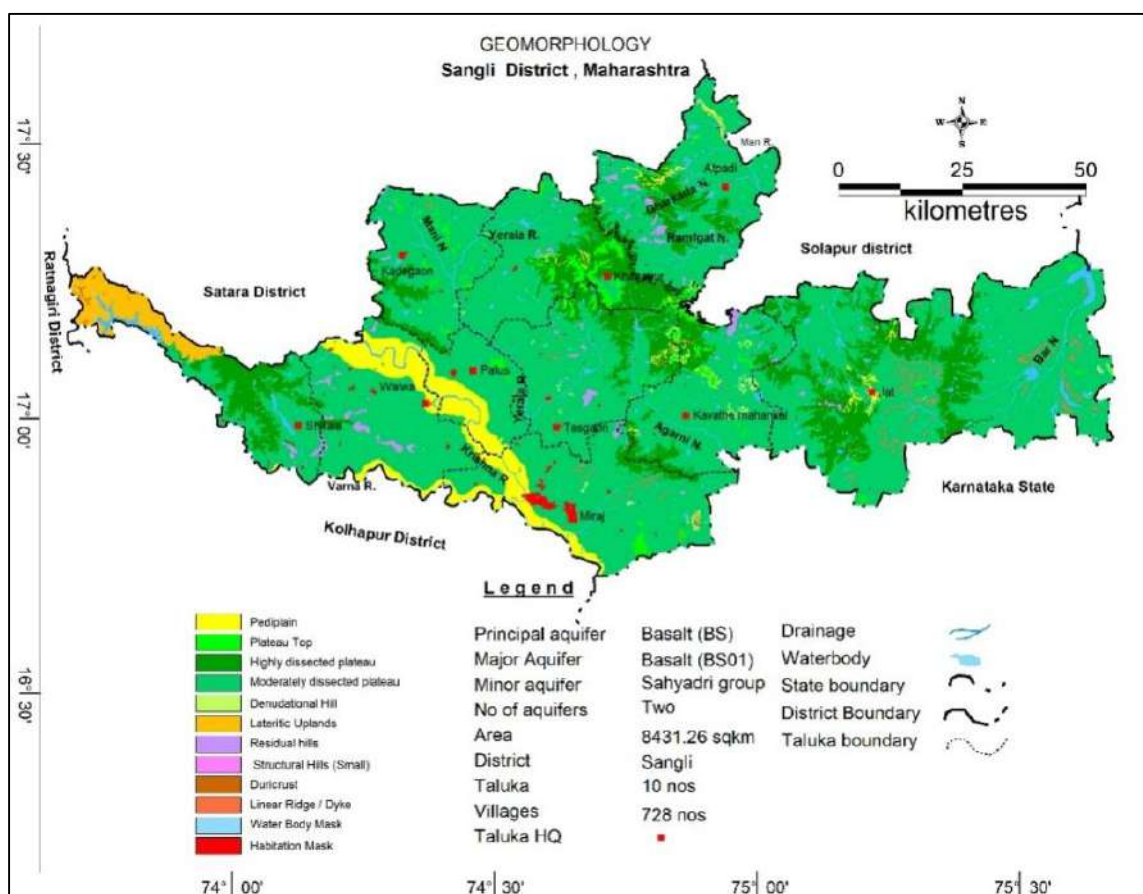


Figure 1.3 : Geomorphology

taluka, Khanapur taluka and minor parts of Jath taluka. Moderately dissected Plateau covers 85% of the whole district. The other hill ranges extend from north to south, south east, covering eastern parts of Khanapur, Tasgaon and Kavathe Mahakal talukas, and

western parts of Atpadi and Jath talukas. These form part of Mahadeo-Khanapur ranges. Geomorphology of the area is presented in **fig 1.3**

The hill ranges are blanked by relatively lower elevation foothill zones, characterised by sloping rolling topography, gradually merging in to the plains, extending along the river valleys. The ground elevation in the foot hills generally vary from 476 to 550 m amsl. The width at foot hill varies from place to place. The pediplain topography occurs in and around the main Krishna River and Varna river. Also the lateritic uplands are seen in the western fringe of Shirala Taluka.

Geologically the area is covered by the basaltic flows related to Deccan Volcanic activity of Cretaceous to Eocene age. They generally exhibit step like topography and hence are known as Deccan Trap. These flows vary in thickness of individual flow from few meters to 40 meters. They extend for a considerable distance. The basaltic lava flow is almost uniform in mineralogical and chemical composition.

The basaltic flow can be classified as Compact, fine-grained, massive basalt and vesicular, amygdaloidal basalt, the vesicles are filled with secondary minerals like Quartz, chalcedony and calcite etc. Comparatively soft, friable and break more easily. The boundaries of basalt flows have been identified on the basis of the presence of red beds, change in joining and weathering pattern, ropy surface etc. Another criteria which can be used for the identification of various basaltic flows is the development of flat surface at various altitudes. These flat surfaces may be taken as flow tops. Basaltic flows are often separated by red to brown colored clayey rock known as 'red beds'. The thickness of red bed varies from few centimeters to more than 2 meters. It also a gradational relationship with the top section of underlying flow.

In high rainfall are and under good drainage condition on weathering of basalt, laterite is formed. During weathering process silica, alkalies and alkaline earth have been leached away leaving behind alumina, iron, manganese and titanium. Laterite shows vermiculite or pisolitic structure. Hills I parts of Shirala, Walwa and Jat taluka are capped by laterite.

Alluvium deposited are more or less stratified deposits of gravel, sand, silt and clays deposited by streams and river. In the district, alluvial deposits are well developed along the banks of the main rivers. They vary in thickness from few meters along Warna, Morna, Yerala, Agrani, Man and Bor rivers to 10.00 to 30.00meters along Krishna river. These deposits commonly show features like graded bedding, current bedding and cross bedding. At the base of these deposits, fine graded sand and silt are present along with kankar nodules locally known as Mann.

The highest elevation varies between 700 and 1104 m amsl. The valley plains of river Yerala flowing west north west – east south east and the river Agarni flowing northeast – south west merge in to the Krishna plains of the district. The other two parts of valley plains are 1) along the Man river in the north east of Atpadi taluka and b) along the Bor river in the eastern parts at Jath taluka. A low plateau area is located near Jath taluka covering about 150 sq. km area with another small patch located southwest. Drainage map in **Fig 1.4**

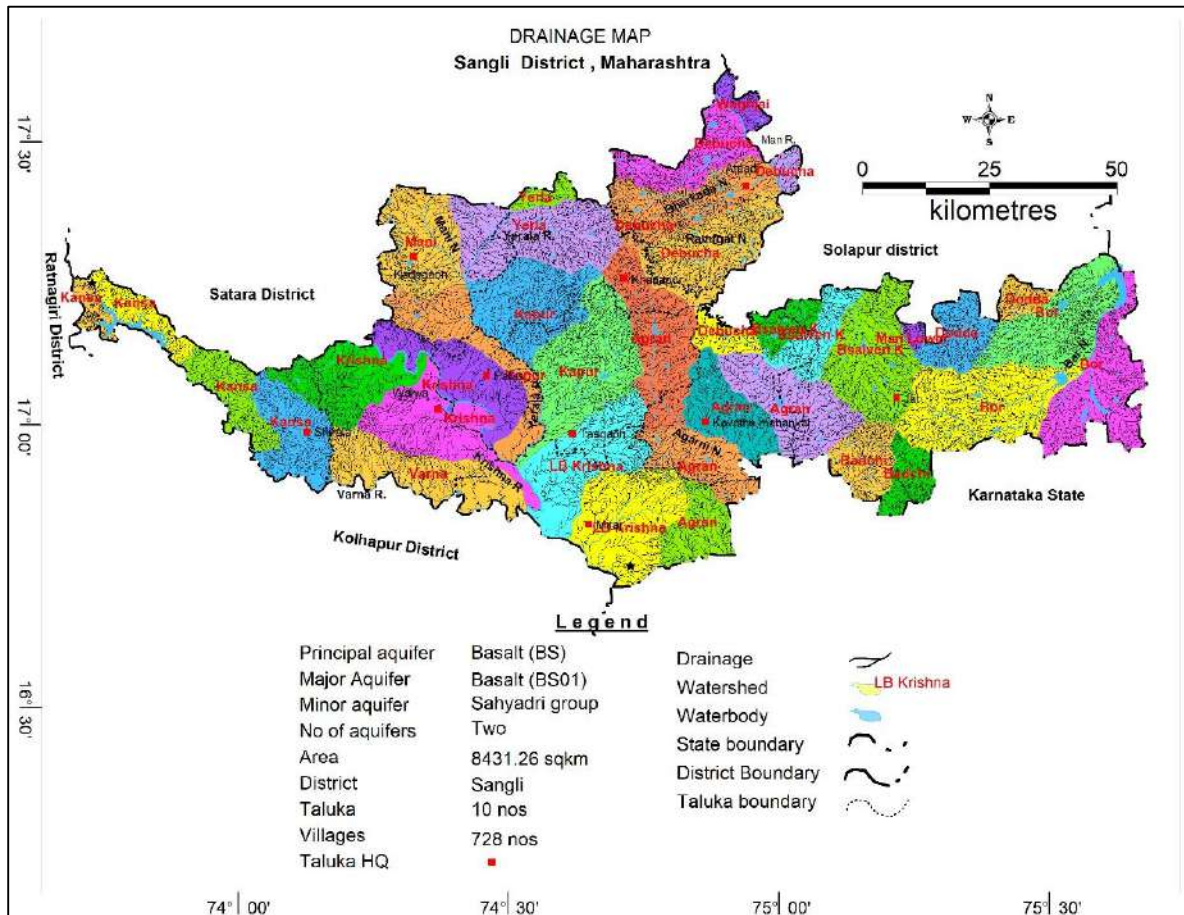


Figure 1.4 :Drainage map

Some parts of the district, especially the river valley areas, are occupied by the typical black soil derived from the deccan traps. All the types, though varying in quality, are fertile on the whole. The black soil contains high alumina and carbonates of calcium and magnesium with variable amount of potash, low nitrogen and phosphorus. The soil is generally porous and swells considerably on addition of water, and dries up with cracks on losing moisture. The black soil is very fertile and does not require manuring for long periods. The broadest belt of this rich soil is found in the Krishna valley. The soil of reddish-brown colour is found on the hills. This type of soil becomes fertile on proper manuring and irrigation. Soil map of the district is given in **fig 1.5**

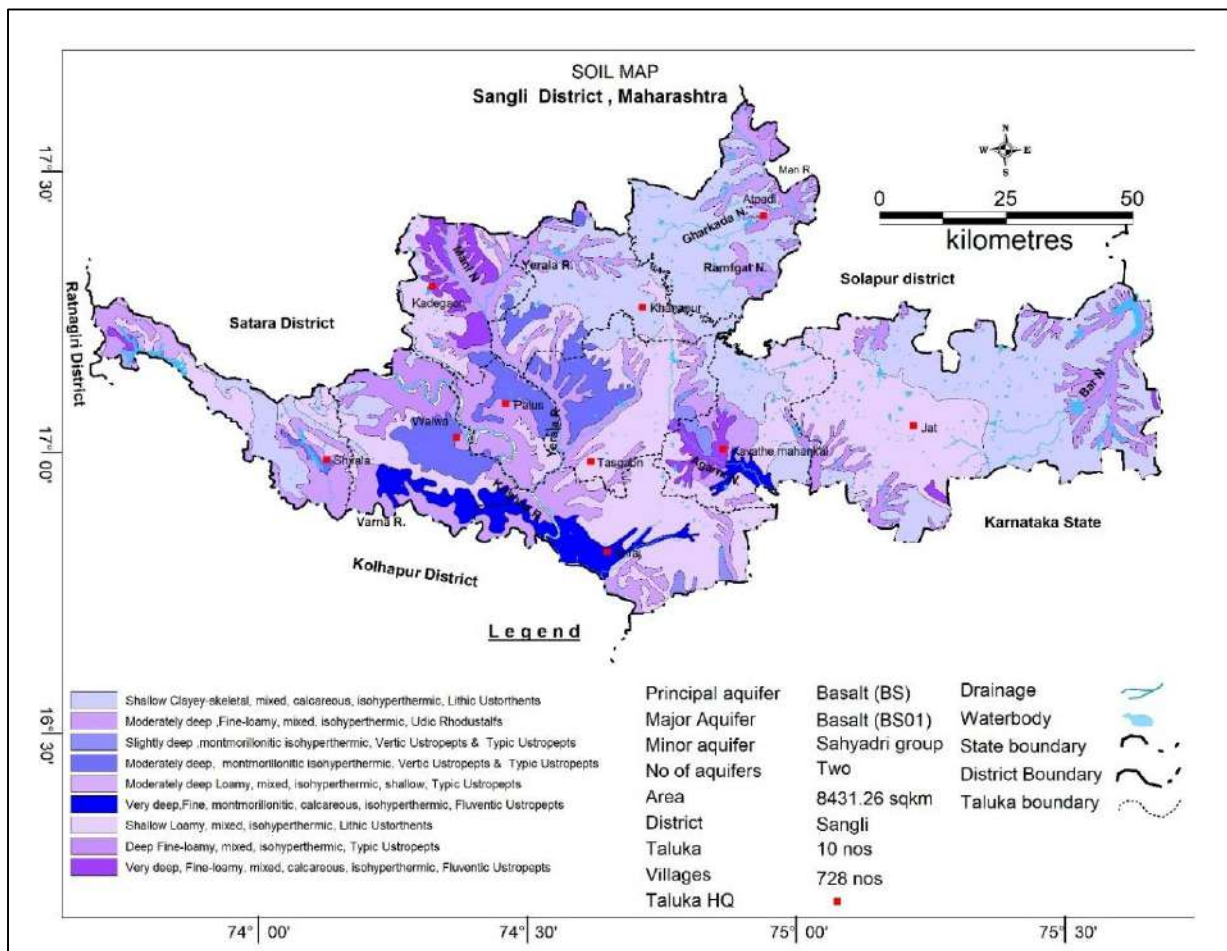


Figure 1.5: Soil map

1.3 Climate and Rainfall

The climate of the district is characterised by general dryness during the major part of the year. Winter season is from November to end of February followed by summer season which is from March to May. The South-West monsoon season is from June to October. The climate of the district is dry except during south west monsoon period that is from June to Sept.

The normal rainfall of the district is 737.2 mm spread over 42 to 80 rainy days in normal condition. Long term rainfall analysis (1998-2021) and annual rainfall data of last ten years is given in **Table 1.1** and **1.2** and **Figure. 1.6**. The spatial distribution of the rainfall is given in **Figure. 1.7**.

Table 1.1: Long-term rainfall analysis

District	Period	No of years	Normal Rainfall (mm)	Std. Deviation (mm)	Coefficient of Variation (%)	Rainfall Trend (mm/year)
Sangli	1998-2021	24	737.2	233.96	28.2	6.86
CATEGORY	NUMBER OF YEARS		% OF TOTAL YEARS			
DEPARTURES						
POSITIVE	13		59			
NEGATIVE	11		50			
DROUGHTS						
MODERATE	2		9			
SEVERE	0		0			
ACUTE	0		0			
NORMAL & EXCESS R/F						
NORMAL	12		55			
EXCESS	10		45			

Table 1.2: Annual rainfall data (2012-2021) (in mm)

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Average Rainfall (mm)
Sangli	409	529.3	642.8	467.6	656.8	600.1	485.6	973.4	962.6	801.9	652.9

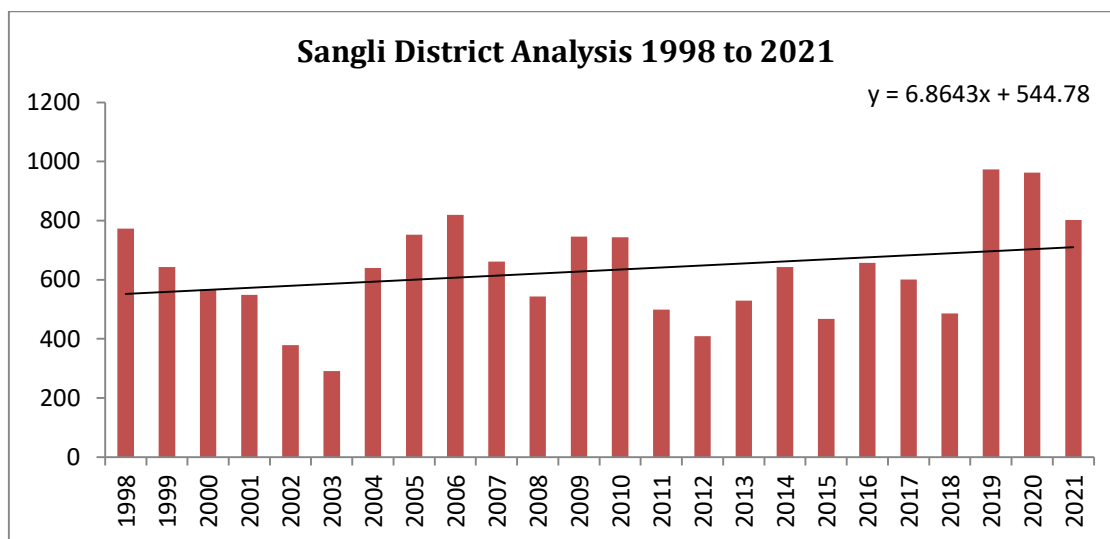


Figure 1.6: Rainfall Analysis (1998-2021), Sangli district

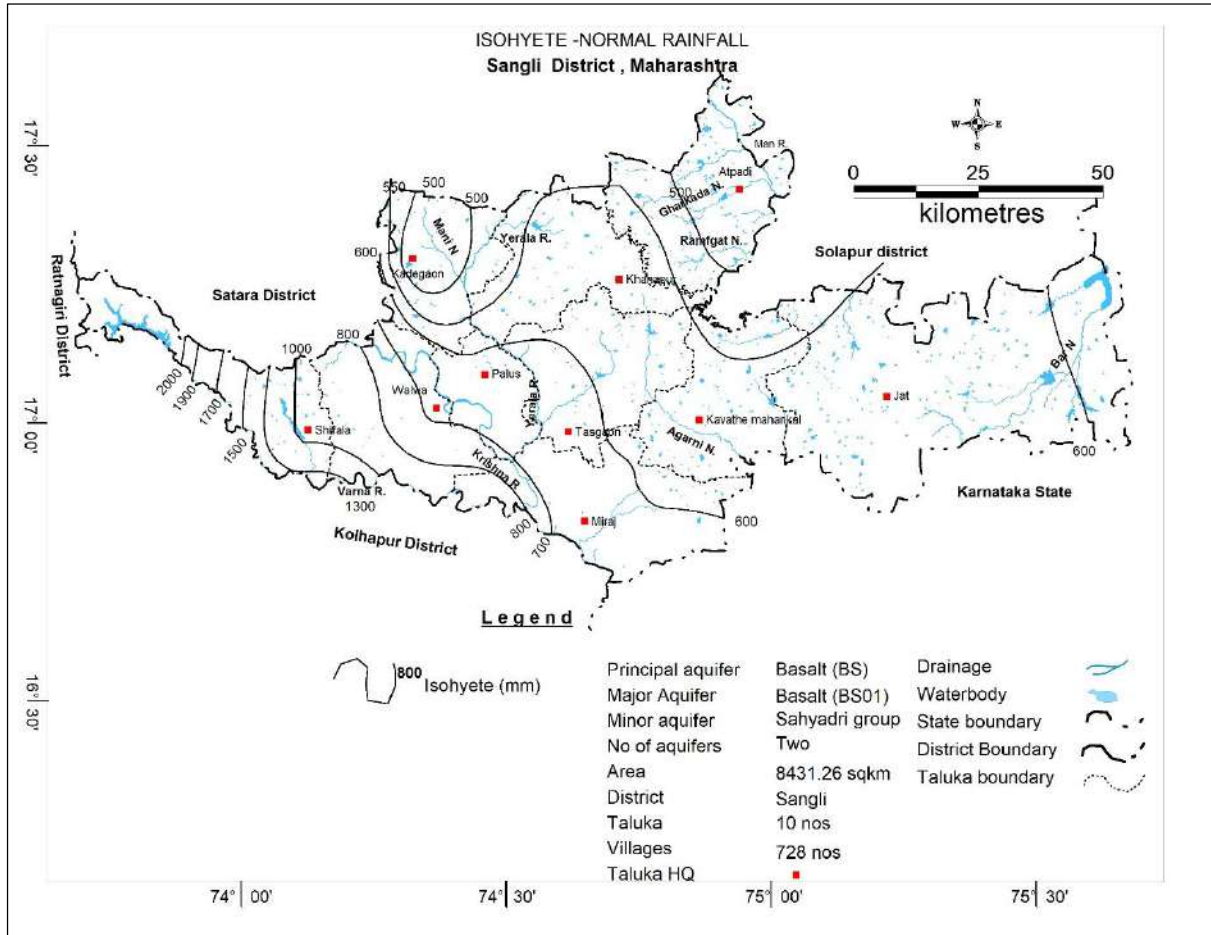


Figure 1.7: Isohyet map of Sangli district

1.4 Soil Infiltration Tests

To estimate the actual rate of infiltration of various soil cover and their impact on recharge to ground water, 2 infiltration tests have been conducted at Dhanewadi and Nevri in various soil types. The data has been analyzed and the salient features of the infiltration tests are presented in **Table 1.3** and the details of the tests are given in **Annexure-III**.

Table 1.3: Salient Features of Infiltration Tests.

Sl No	Village	Date	Duration (min)	Water Level (cm agl)	Final infiltrated Water Depth(cm)	Final Infiltration Rate (cm/hr)
1	Dhanewadi	03/02/2022	105	15.5	1.40	5.60
2	Nevri	03/02/2022	122	12.4	1.70	1.13

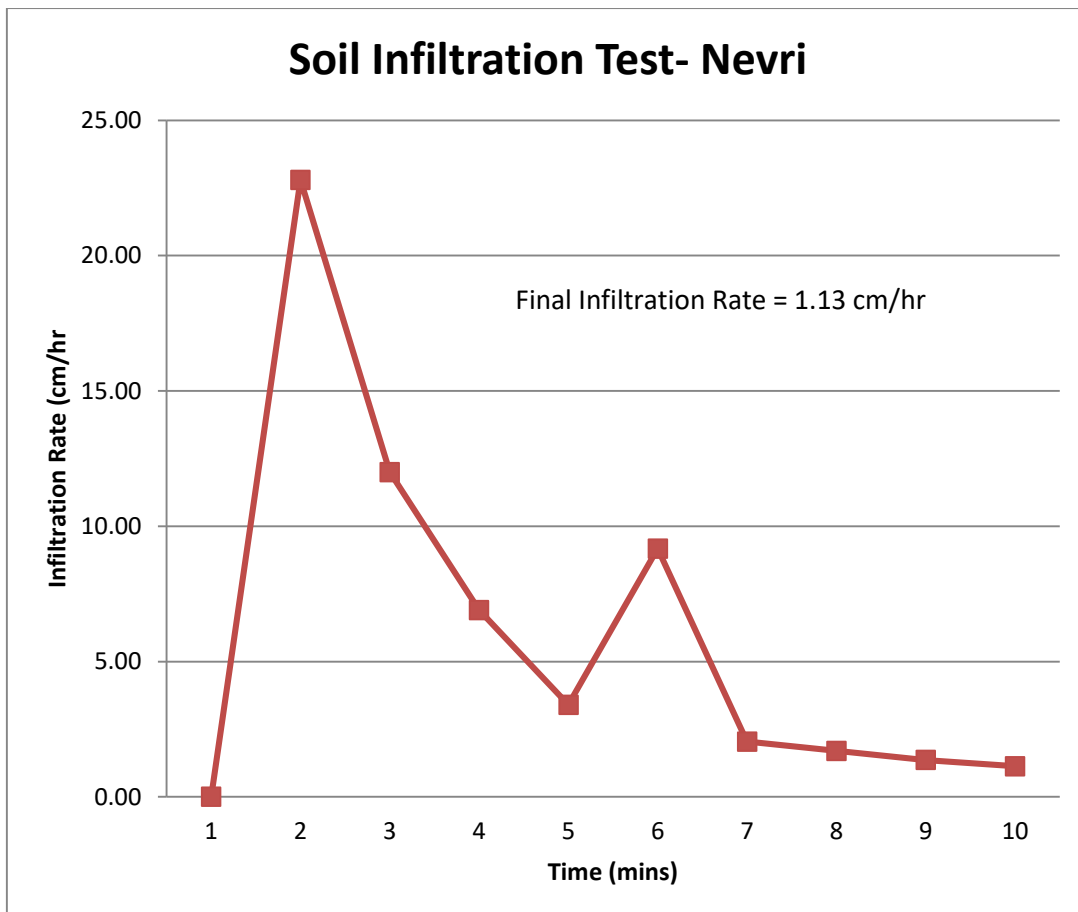
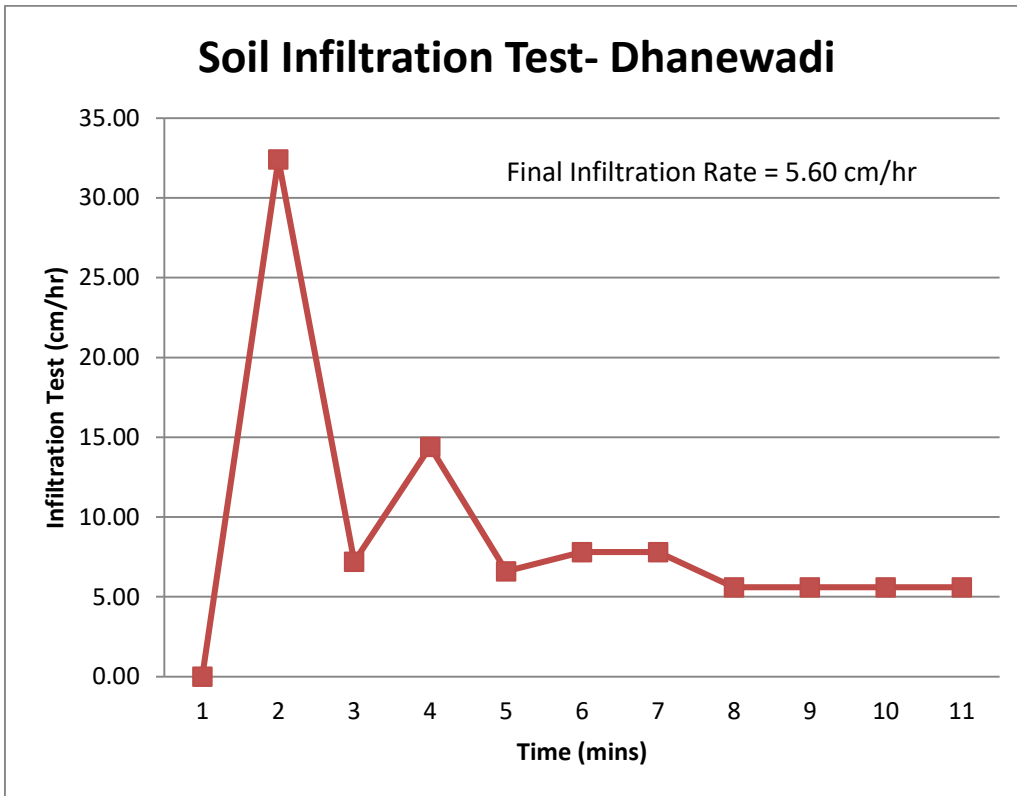


Figure 1.8: Soil Infiltration Tests of Sangli District

2. HYDROGEOLOGY

2.1 Major Aquifer Systems

There are 2 types of aquifer systems in the area namely Alluvium and Basalt. The map showing major aquifer systems of Sangli district is shown in **Figure 2.1**.

The major part of the district is underlain by Deccan lava flows of Upper Cretaceous to Eocene Age, Where is restricted along the banks of the river.

The ground water in basaltic lava flows of Deccan trap occurs under water level and semi-confined to confined condition in deeper aquifers. The vesicular portion of different flows varies in thickness from 8 to 12 m and sometimes up to 20 m. It has primary porosity. However, the density of vesicles, their distribution, inter-connection, depth of weathering and topography of the area are decision factors for occurrence and movements of ground water in these units. The weathered and fractured trap occurring in topographic lows is the main water bearing formation in the district.

The massive portion of the basaltic flows is devoid of water but when it is weathered fractured, jointed thus forming a weaker zone then ground water occurs in it. The massive traps showing persistent spheroidal weathering and exfoliation have more ground water potential than the un weathered massive trap. However, the water carrying capacity of massive traps is not homogenous as it completely depends upon the presence of fracture and joints, their nature, distribution and their interconnection. In the district, ground water in alluvial formation occurs under water table conditions as it is very shallow in depth and spreads over a very limited area. It is observed that the saturated thickness of alluvial material comprises of silt, clay sand and gravel. The detrital material consisting of sand and gravel occurring as thin layer or as lenses in the alluvial pile sometimes forms good aquifer. However, these deposits do not form as potential aquifer in the district as compared to hard rock due to their limited areal extent.

Hard Rock (Deccan Trap Basalt)

Deccan Traps are horizontally disposed thick piles of basaltic lava flows, which are apparently more or less uniform in composition. Each individual flow is a typical section, which varies from porous, weathered base to massive middle unit and becoming increasingly vesicular towards top. Each flow (lower flow and upper flow) is separated from each other by intermittent bole bed which is normally red in colour and called red bole. These bole beds comprise clay which is deposited between two lava eruptions, thus a individual flow forms a district hydrogeological unit as they differ in respect of capacity to receive, stock and transmit water due to the inherent physical characteristics like porosity and permeability.

The vesicular unit of each flow inter connecting vesicles, which provides more space for storage and movement of ground water. However, in "pahoehoe" type of flow, vesicles are separated and sealed, while in "aa" type of flows vesicles are concentrated in upper 20 to 40% of thickness of individual flows. These vesicles are more susceptible to weathering and therefore form good potential aquifers particularly at shallow depth. The massive unit of the flow is basically dense compact and hard and devoid of primary porosity. However, the porosity and permeability have been found to change within the flow and individual unit, from flow to flow and from place to place. Therefore, the variety of physical characteristics of basaltic units amongst themselves gives rise to varying degree of ground water productively in same places.

Ground water in these basaltic flows occurs in the weathered mantle, joints and fractures which serves as loci for accumulation. The degree of fracturing and weathering plays

dominant role in storage of ground water particularly in massive portion of these units as they lack primary porosity and permeability whereas the vesicular portion of these flows are characterised by both primary and secondary porosity and interconnection of vesicles and voids are created by tectonic disturbances. The yield potential of these formations becomes quite significant, when shallow Trappean beds are sufficiently thick and wide in areal extent.

The red bole bed occurs as top unproductive layer on each flow and forms marker horizon in prospecting ground water, as it is associated with more porous bed lying underneath.

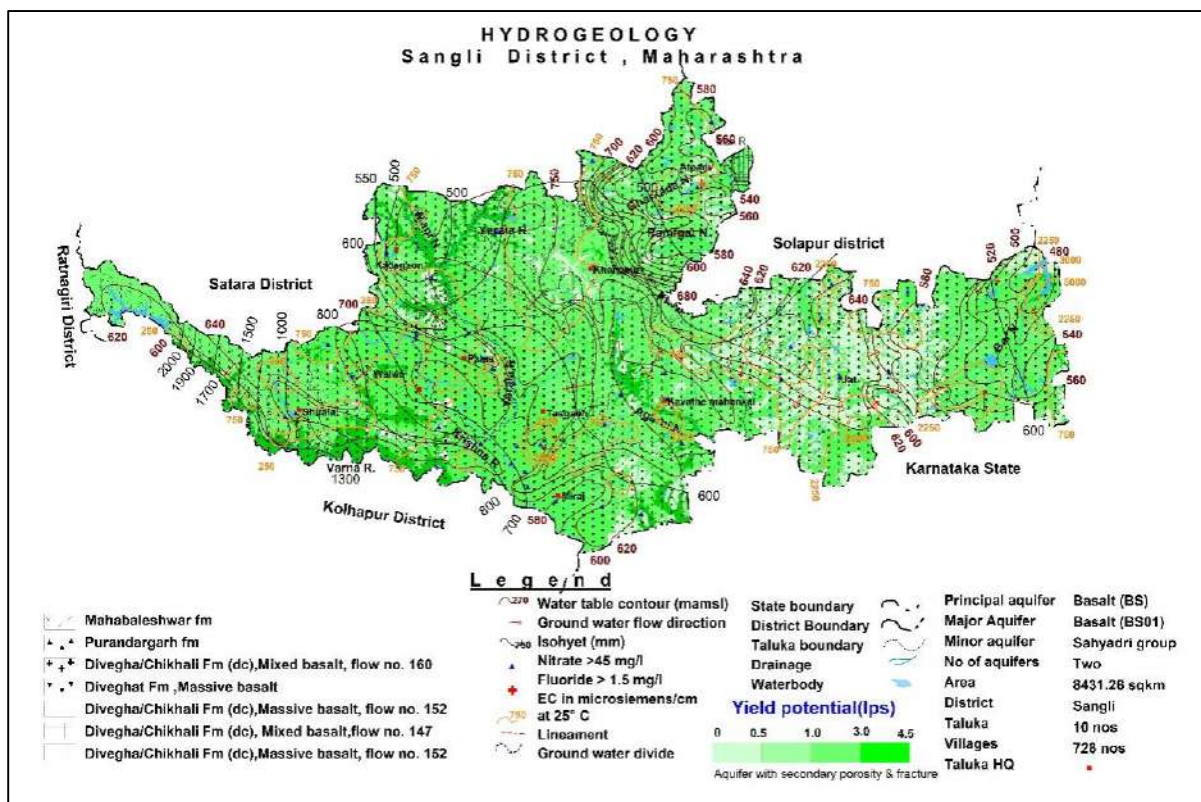


Figure 2.1 – Hydrogeology

Soft Rock (Alluvium)

Alluvium deposits in Sangli district occurs in very thin and isolated pockets along the major rivers. These deposits comprises of upper layer of silty material underlain by layers of coarse detrital materials like sand and gravel with admixture of clay. The coarse detrital material occurring as thin layer or lenses form good water bearing strata while finer material do not permit movement of ground water. The thickness of these deposits in Sangli district varies from 10 to 15 m.

Deccan basalts are hydro geologically in-homogeneous rocks. The weathered and jointed /fractured parts of the rock constitute the zone of ground water storage and flow. The existence of multiple aquifers is characteristic of basalt and is indicative of wide variation in the joint/fracture intensity. The yields of well is function of the permeability and transmissivity of aquifer and it depends upon the degree of weathering and topographic setting of the aquifer. Due to wide variation in secondary openings, the potential areas for ground water are generally localized. In general Ground water occurs under phreatic/unconfined to semi-confined conditions in basalts. Shallow Aquifer generally tapped by the dug wells of 5 to 34 m

Figure 2.1- Depth of Occurance and fractured and granular rock thickness Aquifer-I

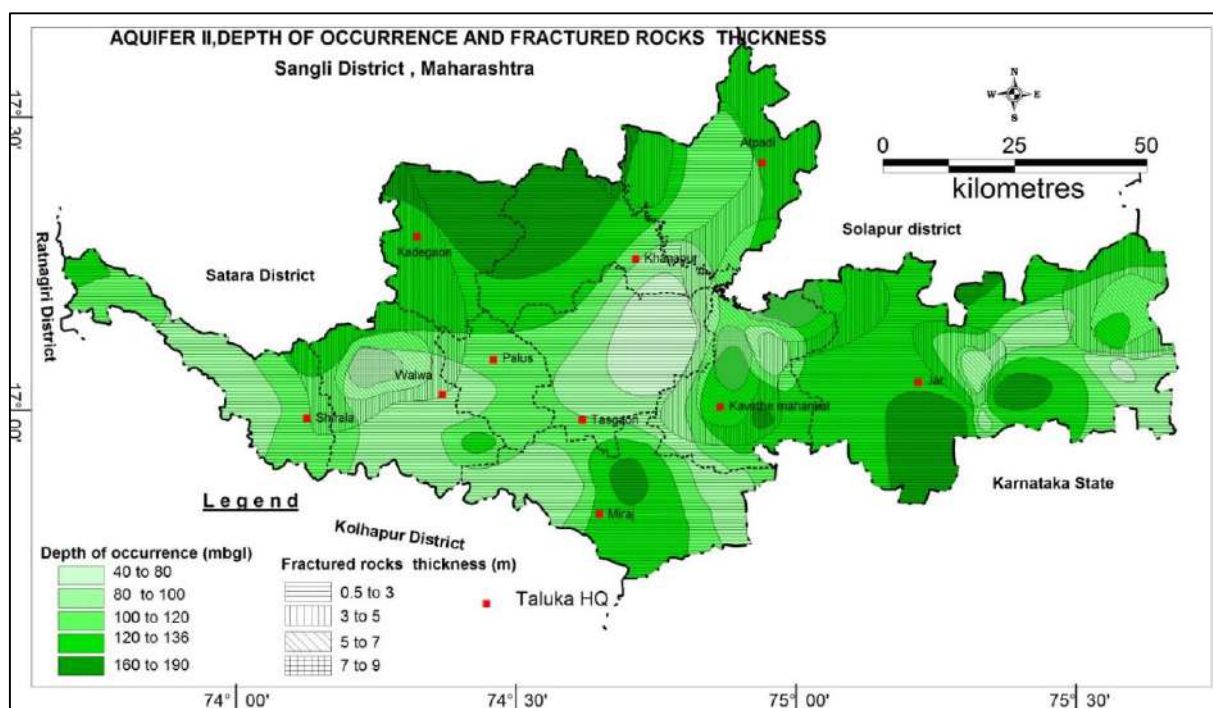
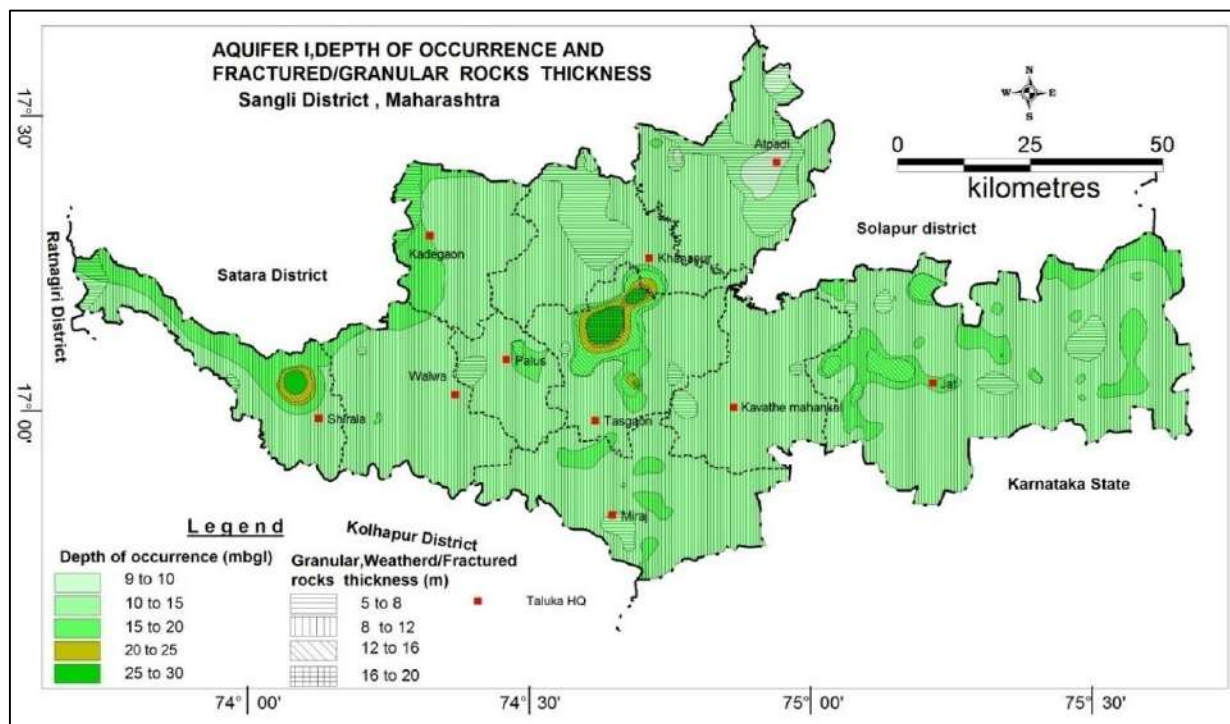


Figure 2.2 – Depth of Occurance and fractured and granular rock thikness Aquifer-II

depth, water levels range from 3.6 to 21.6 m bgl and yield varies from 10-100 m³/day. The deeper Aquifer is being tapped by borewells with depth ranging from 20-180 m bgl and the water level from 6 to 33 m bgl. Based on Ground Water Exploration, Aquifer wise characteristics are given table 5.1. Maps depicting depth of occurrence and fractured/Granular rock thickness and Aquifer wise yield potential maps are shown in **fig 2.4** and **fig. 2.5**

Figure 2.4 – Yield potential Aquifer I

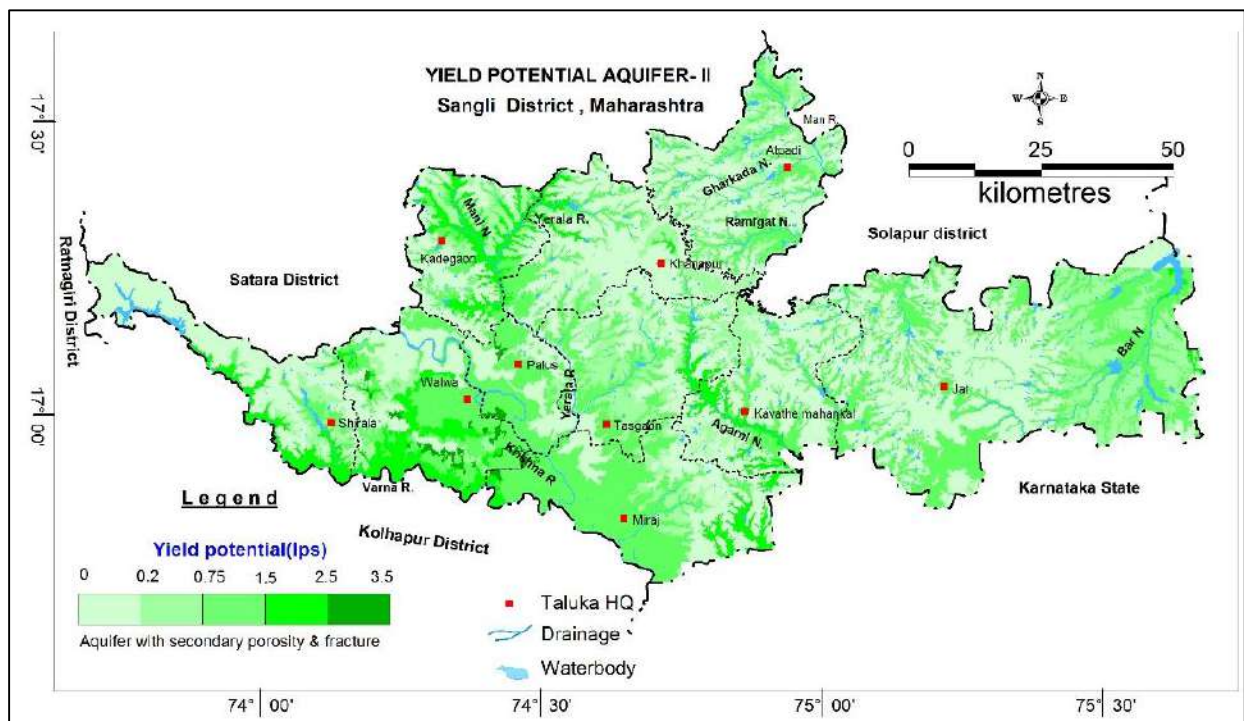
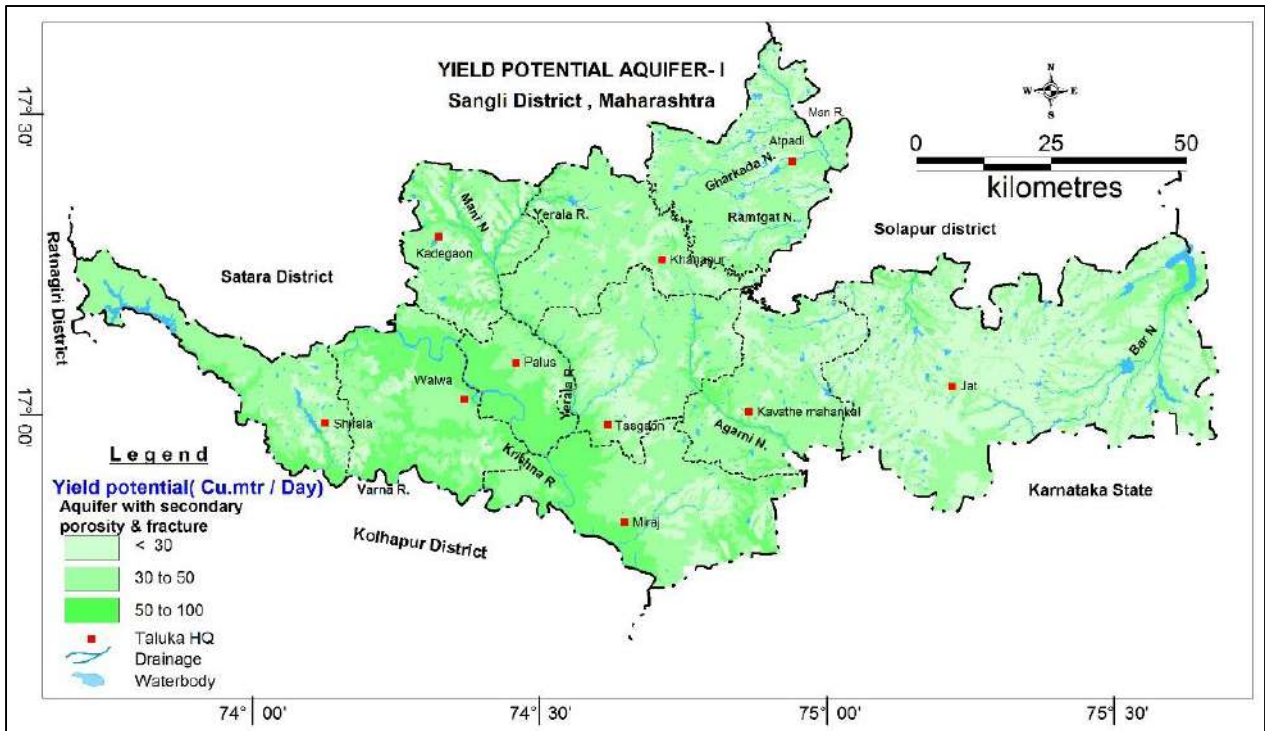


Figure 2.5:-Yield potential Aquifer II

2.2 Aquifer Parameters

Aquifer parameters are available from ground water exploration carried out in the area of the district as well as from the pumping tests carried out on dugwells in Basaltic and Alluvial terrain. For aquifer-I, the specific capacity of the wells tapping Deccan Trap Basalt ranges between 1.7 to 18.9 lpm/m of draw down, the permeability ranges from 12 to 65 m/day and the transmissivity ranges from 2.1 to 51.86 m²/day. The specific yield ranges from 0.019 to 0.028. During the pumping tests conducted on the exploratory wells tapping aquifer-II, the transmissivity was found to vary from 10 to 90 m²/day. The storage coefficient varied between 1.2 x10⁻⁴ to 3.57 x10⁻⁴.

Table 2.2.1. Aquifer Characteristic of Sangli district

Aquifer Type	Formation	Depth range (mbgl)	SWL (mbgl)	Fracture/ weathered Zones encountered (mbgl)	Fractured/ weathered rocks Thickness (m)	Yield (m ³ /Day)	Sustainability	Aquifer parameter (Transmissivity – m ² /day)	Sy/S	Suitability for drinking/ irrigation
Aquifer-I	Deccan Trap-Weathered / Fractured Basalt	9-30	2.0 – 27.0	Upto 30	5 to 20	30 to 100 m ³ /day	1 to 2 Hours	2.1-51.86	0.019 - 0.028	Yes, suitable for both
Aquifer-II	Jointed/ Fractured Basalt	40-190	12-93	Upto 190	0.5 to 9.0	Upto 3.5 lps	0.5 to 3 hours	10.0-90.0	1.20 x 10 ⁻⁴ - 3.57 x 10 ⁻⁴	Yes, suitable for both,

2.3 3-D and 2-D Aquifer Disposition

Based on the existing data, aquifer disposition in 3D, Fence diagram, and several hydrogeological sections have been prepared along section lines shown in **figure 2.3.1 to 2.3.7** to understand the subsurface disposition of aquifer system.

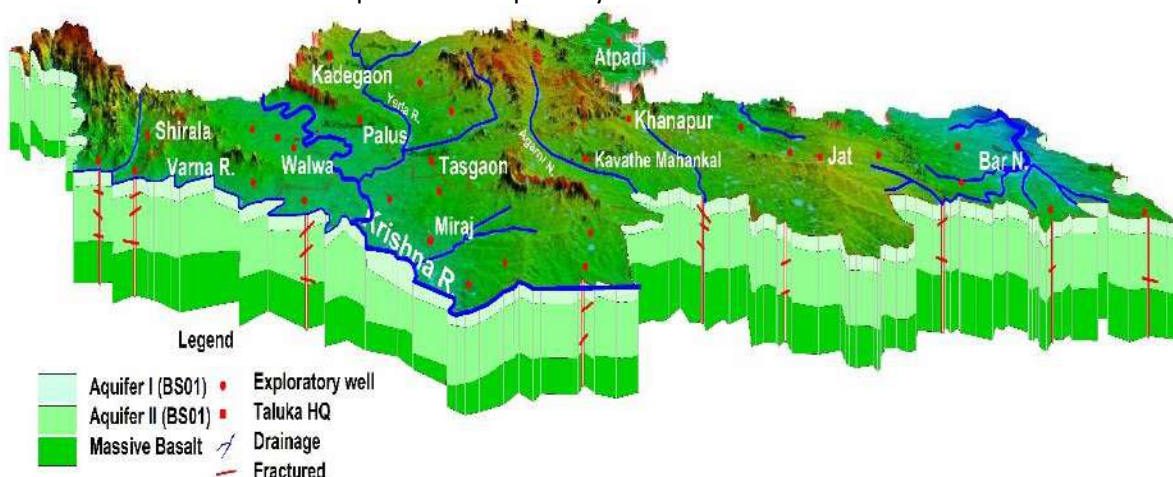
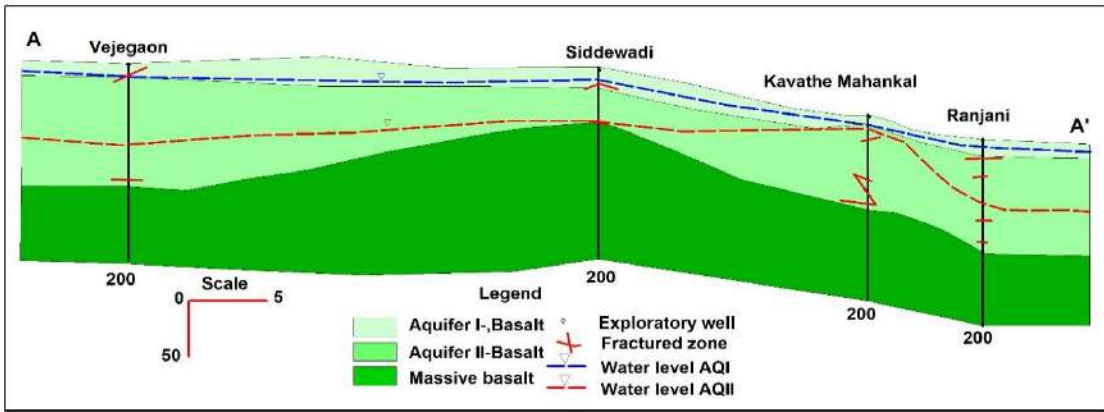


Fig. 2.3.1-3D Aquifer Disposition

Fig.



2.3.4: Lithological section A-A'

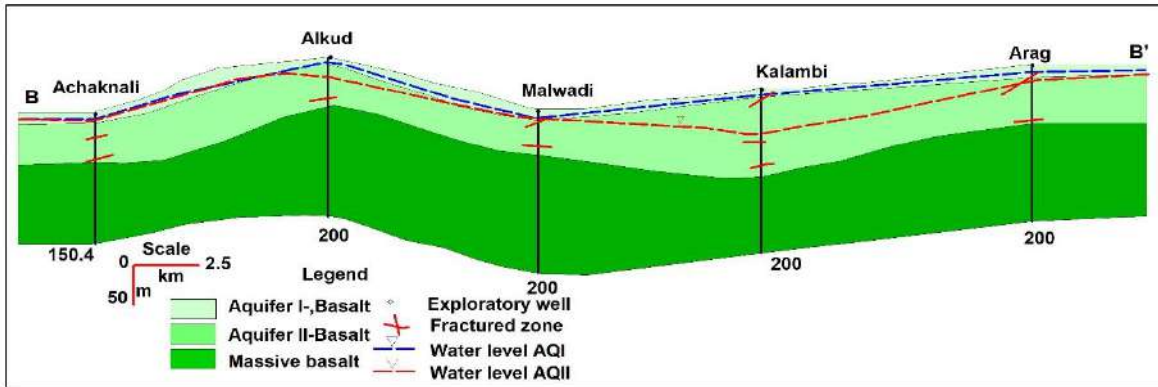
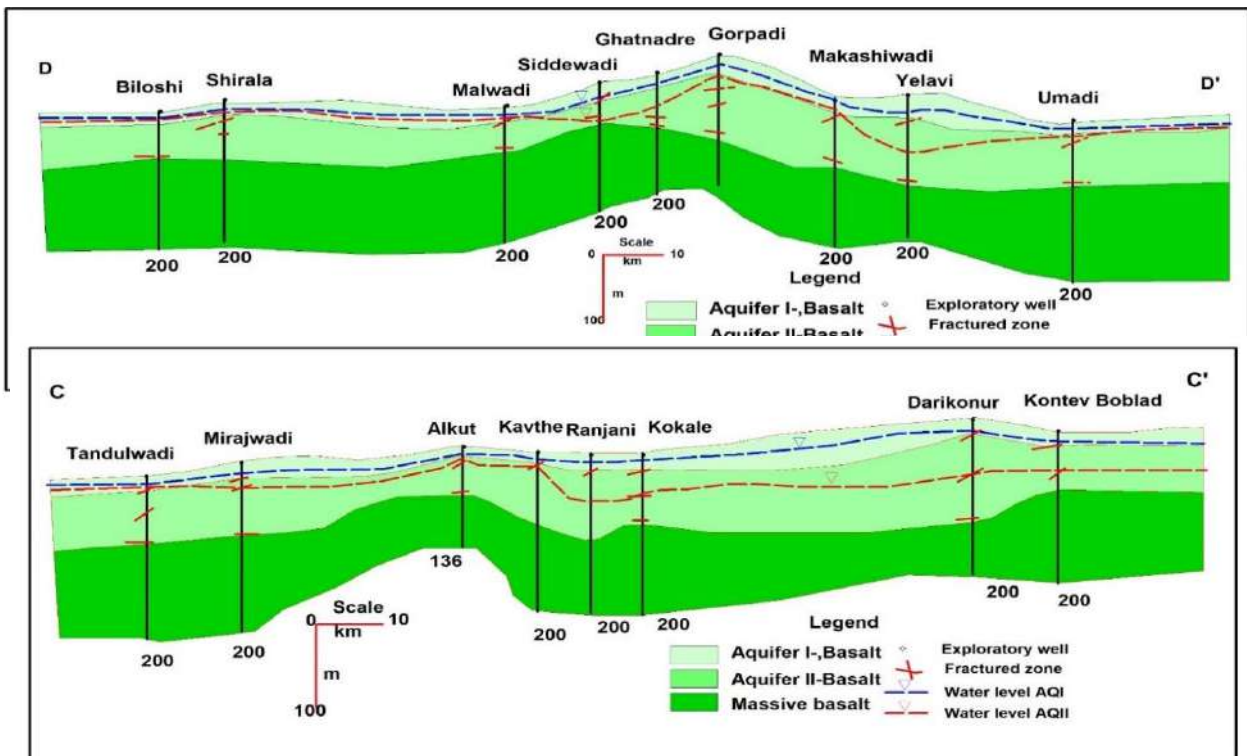


Fig. 2.3.5 : Lithological section B-B'

Fig 2.3.6 : Lithological section C-C'

Fig.2.3.7 : Lithological section D-D'



3. WATER LEVEL SCENARIO

3.1 DEPTH TO WATER LEVEL (AQUIFER-I/SHALLOW AQUIFER)

Central Ground Water Board periodically monitors Ground Water monitoring wells in the Sangli district, four times a year i.e. in January, May (Premonsoon), August and November (Postmonsoon). Under NAQUIM study; the data of 86 Monitoring wells were taken from Ground water Surveys and Development Agency (GSDA), Govt. of Maharashtra. These data have been used for analysis of depth to water level of the district. Pre-monsoon and post monsoon water levels along with fluctuation during 2021 and long-term water level trends (2011-2021).

3.1.1 Depth to Water Level

Pre-monsoon (May-2021) : The depth to water levels in Sangli district during May 2021 ranges between 0.30 (Atpadi village, Atpadi Taluka) and 15.50 mbgl (Pandharewadi village, Atpadi Taluka). Shallow water levels within 2 m bgl are observed in the Eastern part of Atpadi Taluka as well as in the western parts of Shirala taluka and nearby some canal command and river fed areas and also observed in Atpadi, Walwa and Kavthe Mahankal talukas and in the form of patches in Kadegaon, Khanapur and Palus and Miraj Talukas. Water levels between 2 and 5 m bgl are observed in almost 60% of the district area covering major part of Khanapur, Kavthe Mahankal, Jath Talukas and observed in smaller extent in Palus, Shirala and Tasgaon talukas. Coming from west to east the water level is going deeper. Water level between 5 to 10 mbgl are observed in parts of the Jath, Kavthe mahanka, Khanapur, Atpadi and Kadegaon talukas, predominantly in parts of Tasgaon taluka. In the Eastern and southern part of Jath taluka and in the form of patches in Kavthe mahankal, Atpadi and Tasgaon observes the water level between 10 to 20 mbgl.

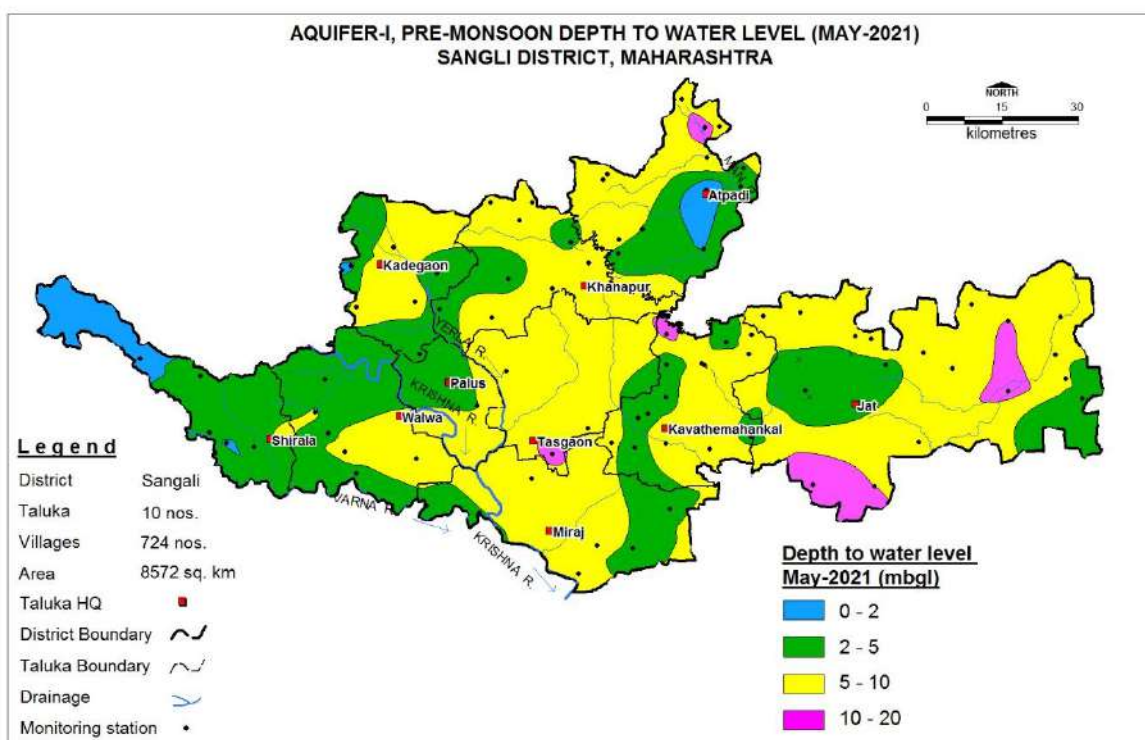


Fig 3.2.1: DTWL shallow aquifer (Premonsoon)

3.1.2 Depth to Water Level

Post monsoon (Noc-2021) The depth to water levels in Sangli district during Nov. 2021 ranges between 0.2 (Atpadi village, Atpadi Taluka) and 12.20 mbgl (Pandharewadi village, Atpadi Taluka). Shallow water levels within 2 m bgl are observed in the Eastern as well as western parts of Shirala and Walwa talukas, predominantly and in the form of patches in Jath, Miraj, Atpadi, Khanapur talukas and nearby some canal command and river fed areas and also observed in Atpadi, Walwa and Kavthe Mahankal talukas and in the form of patches in Kadegaon, Khanapur and Palus and Miraj Talukas. Water levels between 2 and 5 m bgl are observed in major area of the district covering major part of Khanapur, Kavthe Mahankal, Jath Talukas and observed in smaller extent in Palus, Shirala and Tasgaon talukas. In post monsoon also while coming from west to east the water level is going deeper. Water level between 5 to 10 mbgl are observed in northern part of the Jath and also predominantly in parts of Kavthe Mahankal taluka and in patches in Atpadi, Kadegaon talukas. Northern part of Atpadi taluka observes the water level between 10 to 20 mbgl.

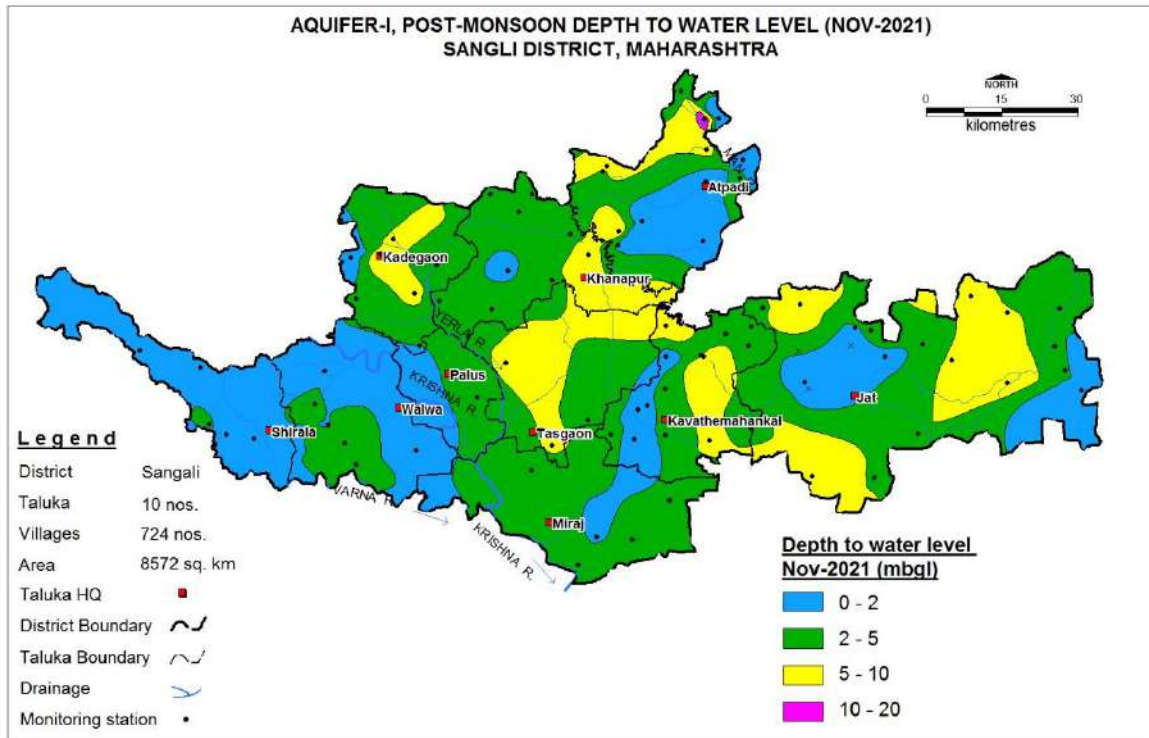


Fig 3.2.2: DTWL Shallow aquifer (Postmonsoon)

3.1.3 Seasonal Water Level Fluctuation (May-Nov. 2021):

It is observed that rise in water level has been observed in entire district in the range of 0.05 to 3.95 m.in Sangli district. Lower range of water level fluctuation observed in the recharging zone while higher water level fluctuation in the zone of discharge and potential area due to over exploitation of ground water. Major parts of the district showing water level fluctuation 0.5 to 3 m. less than 0.5 m and more than 3meter water level fluctuation recorded in isolated patches.

3.2 DEPTH TO WATER LEVEL (AQUIFER-II/DEEPER AQUIFER)

3.2.1 Premonsoon Depth to Water Level

In Deeper Aquifer-II, the pre-monsoon depth to water levels, in Sangli District during Premonsoon period, range from 12.00 (Achaknali, Walwa taluka) to 95.00 mbgl (Kalambi, Miraj taluka). The depth to water level less than 20 mbgl is observed only in isolated parts of Shirala and Jath talukas. The major parts of sangli district show depth to water level between 20 and 30 mbgl. Isolated patches are also observed in Kavathe Mahankal and Atpadi talukas of the district. The deeper water level >40 mbgl are observed in major parts of Khanapur, Tasgaon, Jath and Miraj talukas and in parts of all other talukas. The deepest water level (>50 mbgl) has been observed along the northern portion of Khanapur and and southern parts of Miraj Talukas and in isolated part of Jath and Kavathe Mahankal taluka of the district. This may be due to overexploitation of ground water in potential aquifer Zone. The premonsoon depth to water level for Aquifer –II is given in **Fig. 3.2.1**and the details are presented in **Annexure I**.

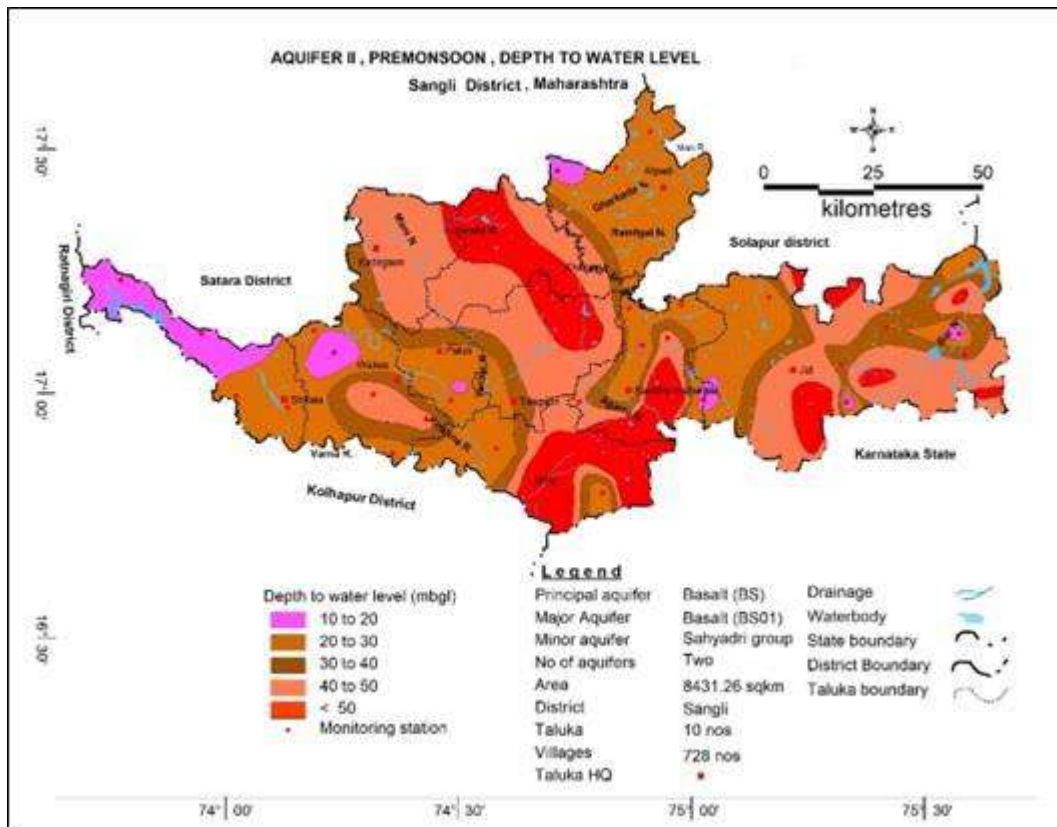


Fig 3.2.3: DTWL deeper aquifer (Premonsoon)

3.2.2 Post monsoon Depth to Water Level

In Aquifer-II, the post monsoon depth to water levels in Sangli District during Postmonsson period range between 4.5 (Madhav Nagar, Miraj taluka) and 45.00 mbgl (Sidhewadi, Jath taluka). Depth to water level less than 10 m bgl has been observed in the southern and south-central part of the district and in parts of Shirala, Miraj, Jath and Atpadi talukas. The major part of the district shows deeper water levels ranging between 10 and 20 mbgl. The deepest water level of more than 20 mbgl is observed in the northern parts of Khanapur and southern parts of Miraj, central part of Jath talukas. The post monsoon depth to water level for Aquifer –II is given in **Fig. 3.2.2 1** and the details are presented in **Annexure I**.

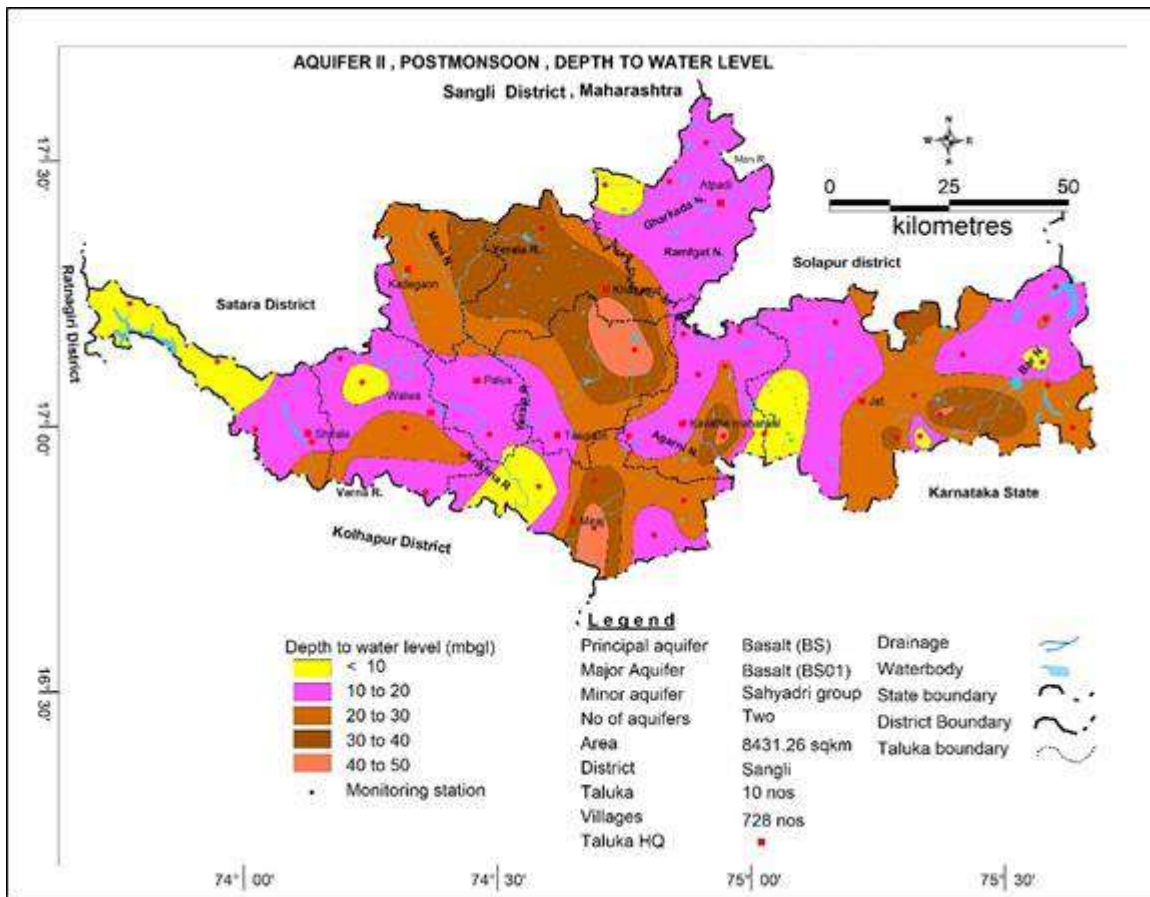


Fig 3.2.4: DTWL deeper aquifer (Post Monsson)

3.3 WATER LEVEL TREND

In Sangli district, pre-monsoon taken during 2012-2021, rise in water levels trend has been recorded at 64 stations and ranges from 0.004 (Borgi Bk, Jath taluka) to 0.71 m/year (Daflapur, Jath taluka) while falling trend was observed in 14 stations varying from 0.002 (Deshing, Kavthe Mahankal taluka) to 0.2359 m/year (Morbagi, jath taluka). During pre-monsoon, Significant decline observed in the central part of district covering Kavthe Mahankal, Tasgaon and Khanapur Talukas and in the form of patches in the eastern part covering Jath, Shirala, talukas and southern portion of the Miraj taluka. Rise in water level trend has been observed in mid-eastern part of the district covering major part of Khanapur, Kavthe Mahankal and Jath talukas. In premonsoon season, declining water level trend has been observed mostly in Central part and also in the form of isolated patches in the area. **(Fig.3.3.1)**

In Sangli district, post monsoon taken during 2012-2021 rise in water levels rising trend has been recorded at 77 stations and it ranges between 0.0155 (Dhavdwadi, Atpadi taluka) to 0.7046 m/year (Vithalapur, Atpadi taluka) while falling trend was observed in 15 stations varying from 0.0055 (Kavathe Mahankal taluka) to 0.3197 m/year (Antral, Jath taluka).

In post monsoon season, fall in water level trend has been observed in the major parts of the district covering northern, central, eastern and southern part. Significant decline more than 0.20 to 0.40 m/year has been observed in eastern part of the district in Jath Taluka.

(Fig 3.3.2)

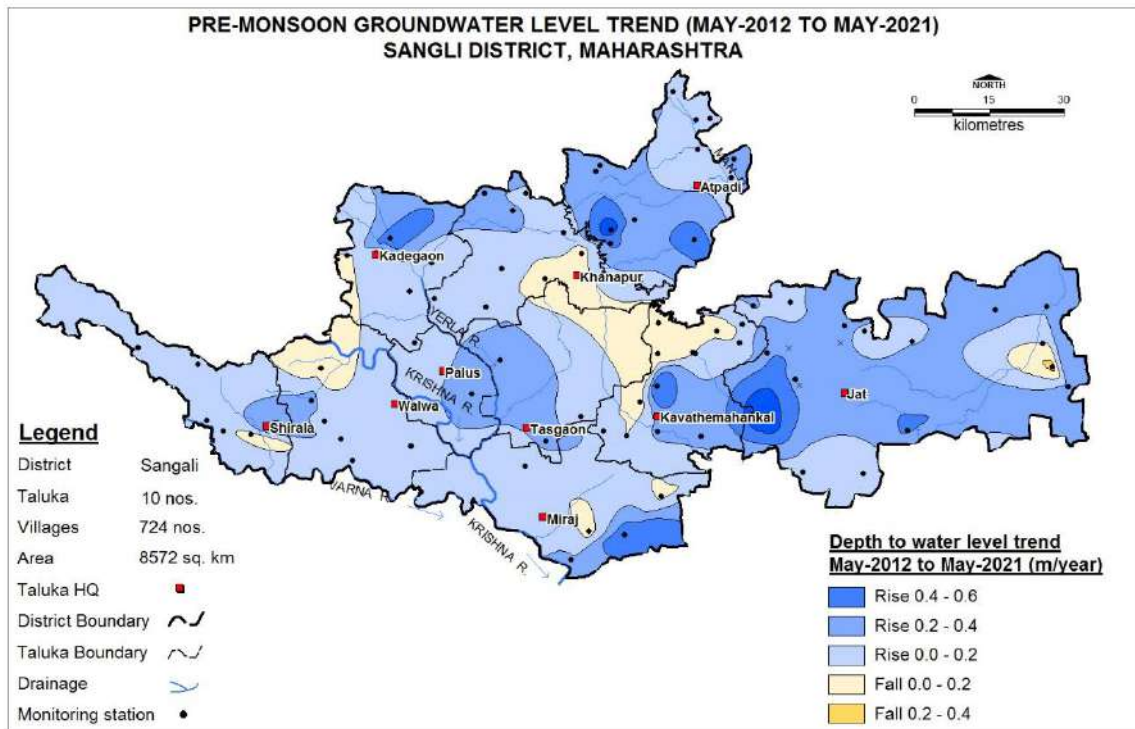


Fig.3.3.1:Pre-monsoon decadal trend (2012-21)

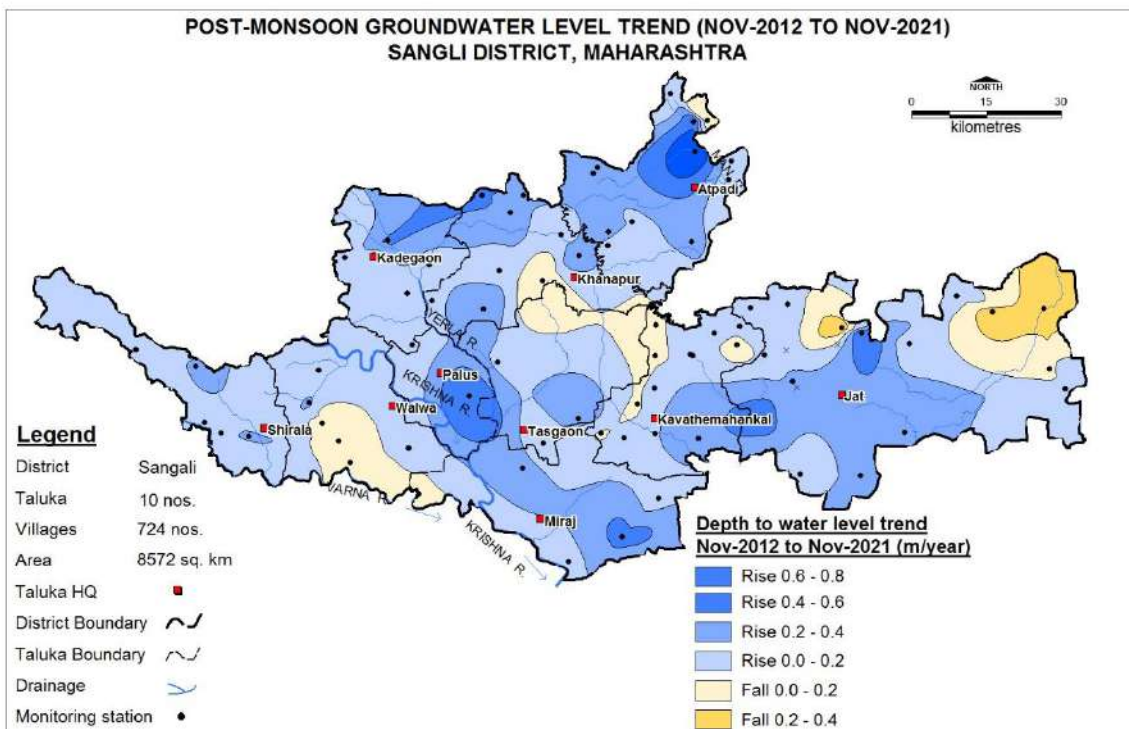


Fig 3.3.2: Postmonsoon decadal trend (2012-21)

3.4 HYDROGRAPH ANALYSIS

The variation in short term and long-term water level trends may be due to variation in natural recharge due to rainfall and withdrawal of groundwater for various agricultural activity, domestic requirements and industrial needs. The analysis of hydrographs show that the annual rising limbs in hydrographs indicate the natural recharge of groundwater regime due to monsoon rainfall, as the monsoon rainfall is the only natural source of water for recharge to the ground water regime (Fig. 3.4.1 to 3.4.5). However, continuous increase in the groundwater draft is indicated by the recessionary limb.

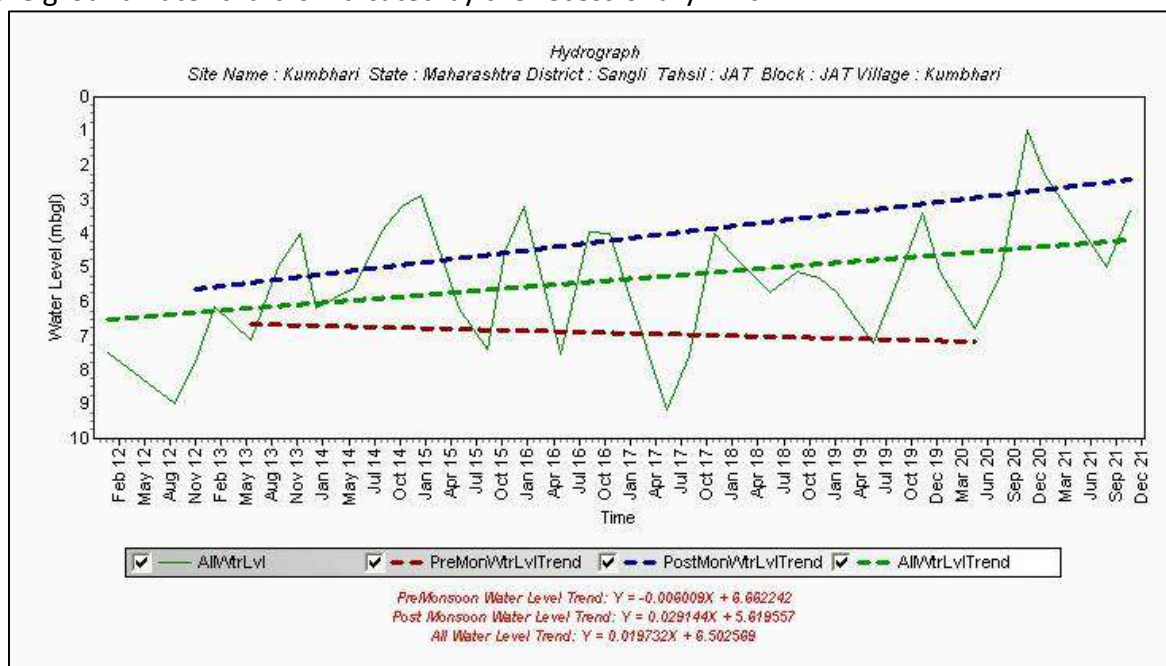


Fig 3.4.1: Hydrograph (2012-2021), Kumbhari, Jath Taluka

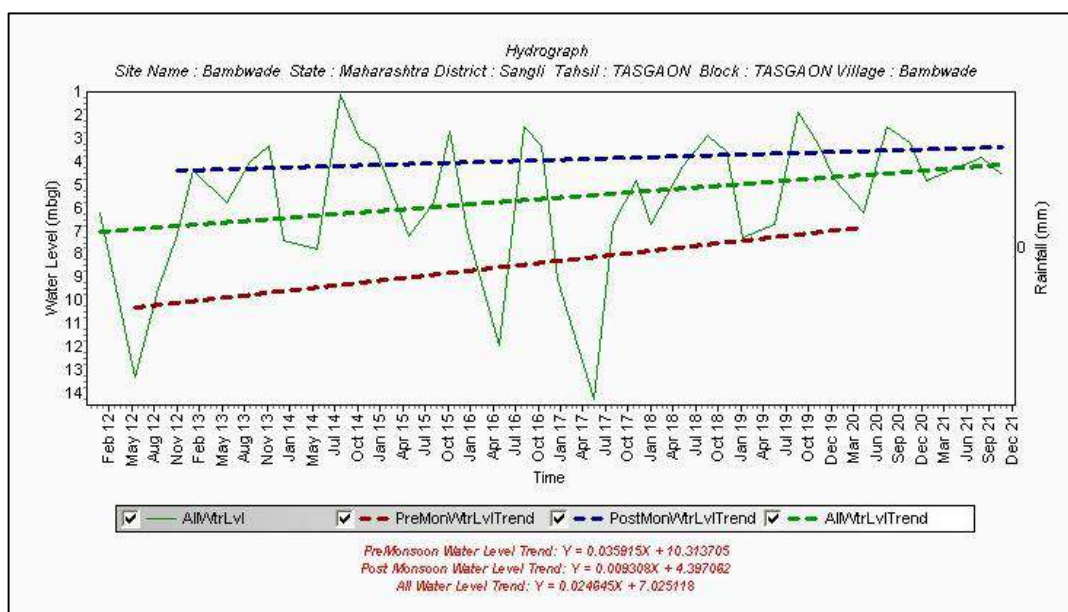


Fig 3.4.2: Hydrograph (2012-2021), Bambwade, Tasgaon Taluka

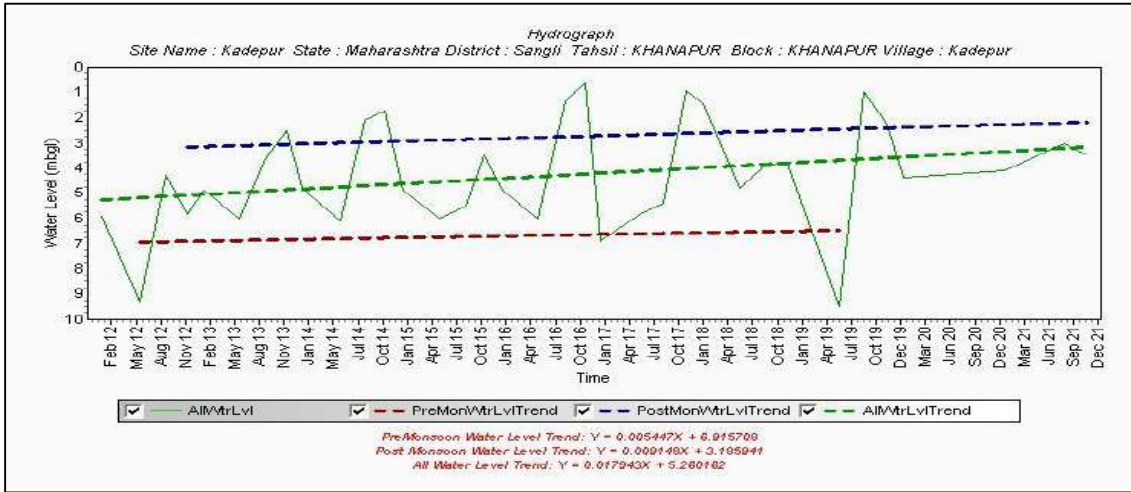


Fig 3.4.3: Hydrograph (2012-2021), Kadepur, Khanapur Taluka

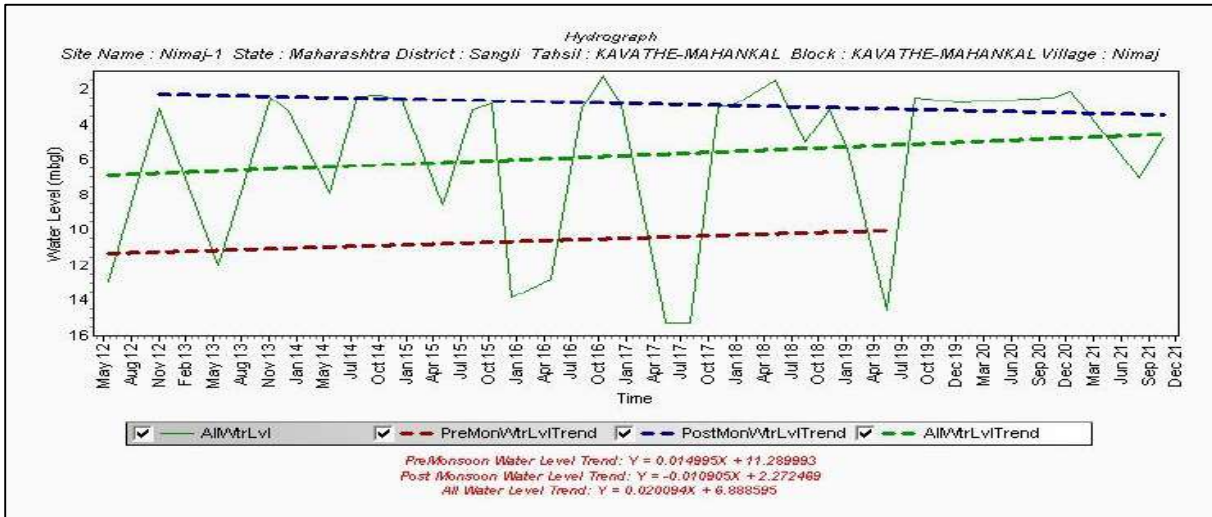


Fig 3.4.4: Hydrograph (2012-2021), Nimaj, Kawthe Mahankal Taluka

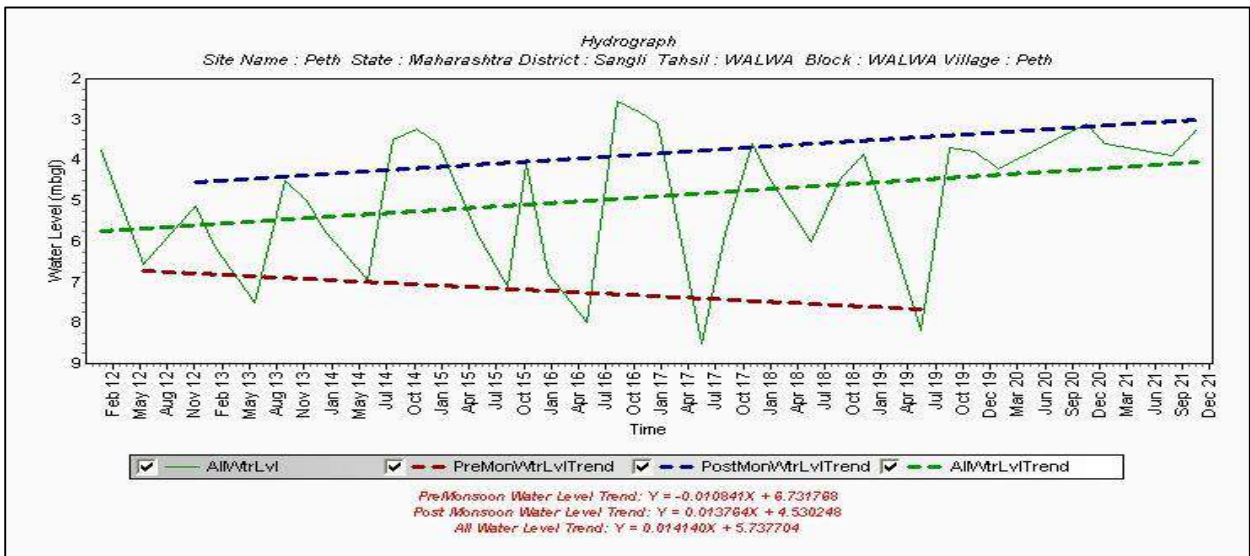


Fig 3.4.5: Hydrograph (2012-2021), Peth, Walwa Taluka

4. GROUND WATER QUALITY

Water sampling is being done every year from GWM wells during pre-monsoon period (May). The data gap analysis has been carried out to find out the adequacy of information on water quality and identified additional locations, 33 for shallow aquifers. Ground water quality data of 174 monitoring wells of CGWB and GSDA representing shallow aquifer representing shallow aquifer have been utilised to decipher the quality scenario of shallow aquifer. 110 exploratory wells tubewells / borewells of CGWB and GSDA representing deeper aquifer have been utilised to decipher the quality scenario of deeper aquifer. The aquifer wise ranges of different chemical constituents present in ground water are given in **table 4.1**. The details of water quality analysis are given in **Annexure VI and VII**.

Table 4.1: Aquifer wise ranges of chemical constituents in Sangli district

Constituents	Shallow aquifer		Deeper aquifer	
	Min	Max	Min	Max
pH	7.1	8.7	6.6	8.8
EC	130	7500	132	4170
TDS	83	4012	74	2528
TH	52	2500	30	1590
Calcium	12.8	1569	4	825
Magnesium	0	338.8	1	184
Potassium	0.1	110.8	0.1	591
Sodium	6.8	535	4	591
Carbonate	0	72	0.1	21
Bi-carbonate	34.2	1288.3	36	409
Chloride	20.6	1979	11	730
Sulphate	1	1450	1	846
Nitrate	0.1	286	0.1	654
Fluoride	0.09	3.1	0.01	6.1
Iron	0.1	1.9	0.1	128

4.1 ELECTRICAL CONDUCTIVITY (EC)

4.1.1 Distribution of Electrical Conductivity in Shallow Aquifer:

The concentration of EC in shallow aquifer varies between 138 (Shirshi & Chickalwadi, Shiralataluka) and 7500 μ S/cm (Kavalapur, Miraj taluka). Out of 174 samples collected from dug wells, 11 samples are having EC in range of 3000 to 7500 μ S/cm and no samples having EC > 7500 μ S/cm. It is observed that the concentration of high EC >3000 μ S/cm has been observed in major parts of Miraj and Kavate Mahankal talukas and small parts of Jath taluka. The ground water is potable in the remaining parts of the district. The distribution of electrical conductivity in shallow aquifers is shown in **fig: 4.1.1** and analytical data is presented in **table 4.1.1**

4.1.2 Distribution of Electrical Conductivity in Deeper Aquifer:

The concentration of EC in deep aquifer varies between 132 (Walkhadi, Khanapur taluka) and 4170 $\mu\text{S}/\text{cm}$ (Bamni, Miraj taluka). Out of 110 samples collected from tube wells/bore wells, 6 samples are having EC in range of 3000 to 7500 $\mu\text{S}/\text{cm}$. It is observed that the concentration of high EC more than 3000 has been observed in southern part of Miraj taluka near Krishna river, central part of Walwa taluka and also in eastern part of Jath taluka. The ground water is potable in the remaining parts of the district. The distribution of electrical conductivity in deeper aquifers is shown in **fig: 4.1.2** and analytical data is presented in **table 4.1.1**.

Table 4.1.1: Aquifer wise Electrical conductivity data

S.No.	EC ($\mu\text{S}/\text{cm}$)	shallow aquifer		Deeper Aquifer	
		No. of samples	% of samples	No. of samples	% of samples
1	< 250	9	5	3	3
2	>250-750	53	30	40	36
3	>750-2250	94	54	55	50
4	2250-3000	7	4	6	5
5	3000-7500	11	6	6	5
6	>7500	0	0	0	0
Total samples		174	100	110	100

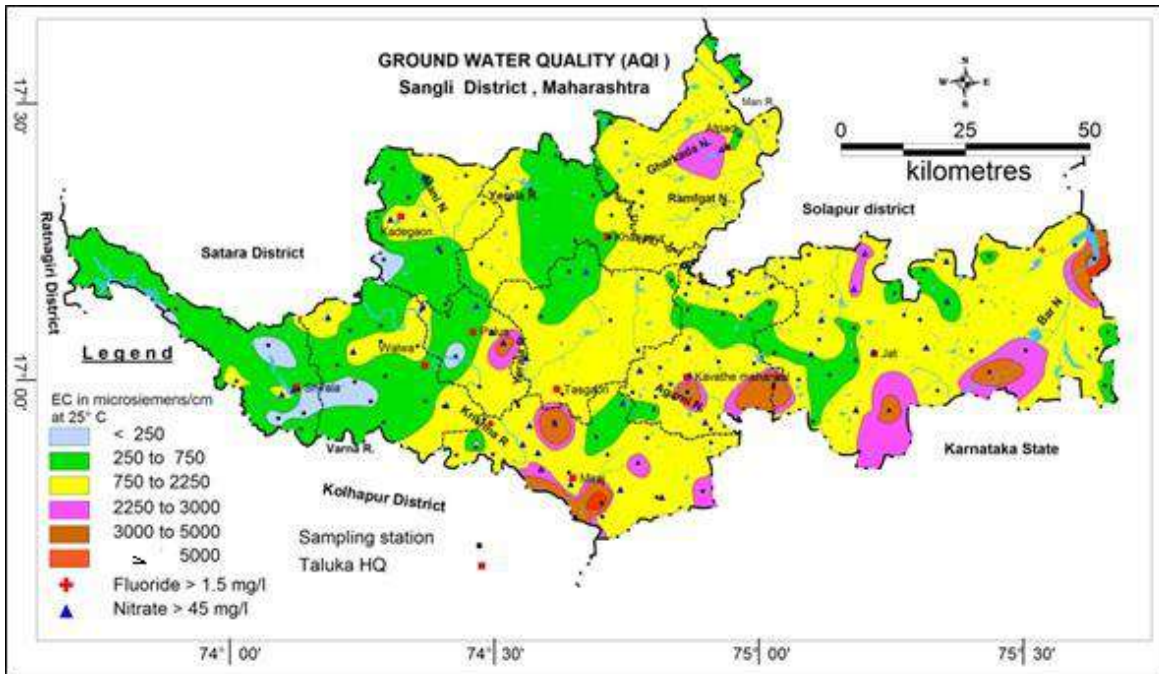


Fig. 4.1.1 : Ground water quality, Aquifer-I

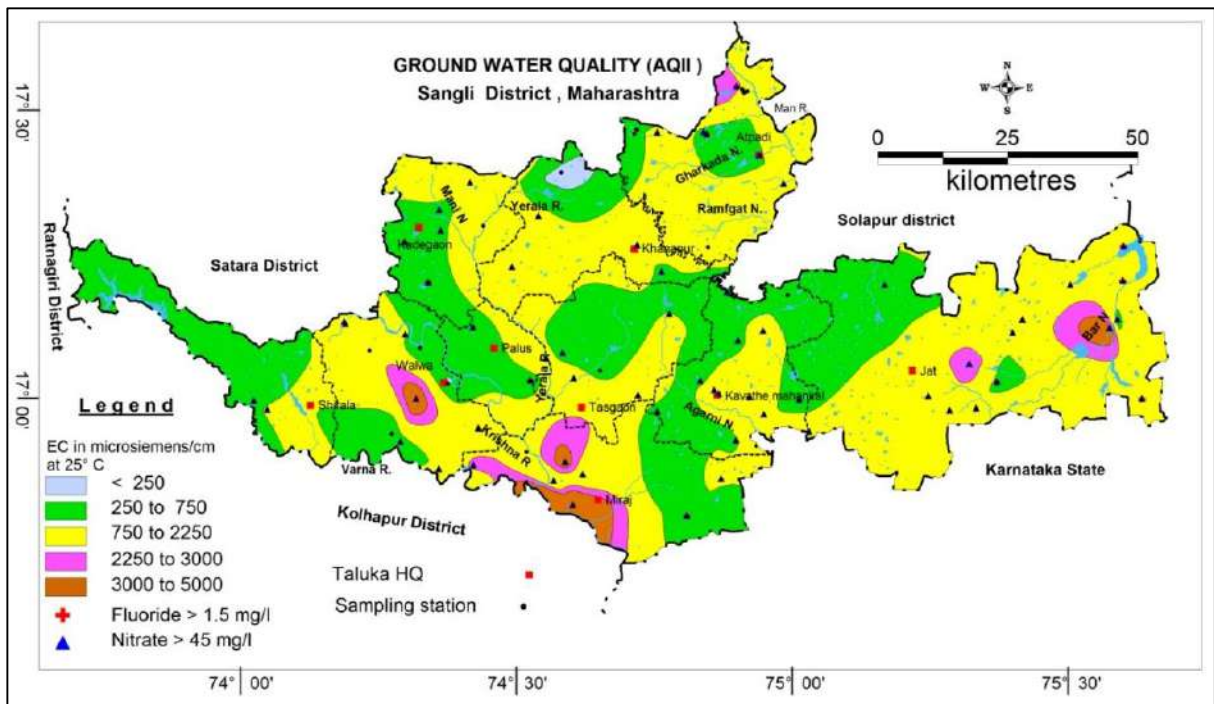


Fig. 4.1.2: Ground water quality, Aquifer-II

4.2 Nitrate:

Nitrogen in the form of dissolved nitrate nutrient for vegetation, and the element is essential to all life. The major contribution in ground water is from sewage, waste disposal, nitrate fertilizer and decaying of organic matter. In Sangli district nitrate concentration varies between 0.1 to 654 mg/l. As per BIS (2012) the desirable limit is 45 mg/l. In shallow aquifer, 174 samples were analysed, out of this 42 water samples show the nitrate concentration exceeded the desirable limit of 45 mg/l. The high concentration of Nitrate may be due to domestic waste and sewage in the urban and rural parts of district. In deeper aquifer, 110 wells analysed, out of this 18 water samples show that the nitrate concentration exceeded the desirable limit of 45 mg/l. The deeper aquifer are also affected by nitrate contamination, it may be due to percolation of nitrate contaminants from the ground surface as there are no other reasons for nitrate contamination in deeper aquifers. Aquifer wise nitrate concentration is given in **table 4.1.2**.

4.3 Fluoride:

In shallow aquifer, concentration of fluoride ranges from 0.09 to 3.1 mg/l. out of 174 samples analyzed, only 14 samples show fluoride concentration more than 1 mg/l. In shallow aquifer, the highest concentration of fluoride is found in Nigai Bk. Village, Jath taluka (3.1 mg/l). In Deeper Aquifer, concentration of fluoride ranges from 0.01 to 6.1 mg/l. out of 110 samples analysed, 28 samples show fluoride concentration more than 1 mg/l. In Deeper aquifer, the highest concentration of fluoride is found in Daikonur (6.1 mg/l), Umadi (5.4 mg/l) villages of Jath taluka (6.1 mg/l). Water samples of Jath taluka is

contaminated by Fluoride and it may be due to the lithological reason only. Aquifer wise fluoride concentration is given in **table 4.1.2**.

Table 4.1.2: Aquifer wise Nitrate and Fluoride concentration in Sangli district

S/N	Taluka	No ₃ > 45 mg/l No of samples		fluoride >1 mg/l No of samples	
		Shallow Aquifer	Deeper Aquifer	Shallow Aquifer	Deeper Aquifer
1.	Miraj	10	1	1	3
2.	Jath	11	10	5	13
3.	Khanapur Vita	5	0	0	1
4.	Walva Islampur	3	3	0	0
5.	Tasgaon	5	0	0	2
6.	Shirala	0	0	2	1
7.	Atpadi	3	3	2	3
8.	Kavthemahankal	4	1	4	4
9.	Palus	1	0	0	0
10.	Kadegaon	0	0	0	1
	Grand Total	42	18	14	28

4.4 Suitability of Ground Water for Drinking Purpose

In shallow aquifer, 3% samples are having TDS concentration more than maximum permissible limit (MPL) and 71 % of samples have TDS concentration above the Desirable limit (DL) but below the MPL. The water from such area is not fit for drinking purpose if directly consumed without treatment. It is also seen that about 1 to 24 % samples are beyond the maximum permissible limit for the parameters like TH, Ca, Mg, Cl, So₄ and No₃ indicating that the water is not suitable for drinking purpose. Concentration of Chemical constituents in shallow Aquifer is given in **table 4.2.1**

In Deeper aquifer, 5 % samples are having TDS concentration more than maximum permissible limit (MPL) and 45 % of samples have TDS concentration above the Desirable limit (DL) but below the MPL. The water from such area is not fit for drinking purpose if directly consumed without treatment. It is also seen that about 1 to 7 % samples are beyond the maximum permissible limit for the parameters like TH, Ca, Mg, Cl, So₄ and No₃ indicating that the water is not suitable for drinking purpose. Concentration of Chemical constituents in deeper Aquifer is given in table 4.2.3

Table 4.2.1 Concentration of Chemical constituents in shallow Aquifer

Parameter	Drinking water Standards (IS-10500-2012)	Total samples	Shallow aquifer, no and percentage of Samples		
			(<DL)	(DL-MPL)	(>MPL)

	DL	MPL		No	%	No	%	No	%
pH	6.5-8.5	-	174	0	0	173	99	1	1
TDS(mg/L)	500	2000	174	55	32	124	71	5	3
TH(mg/L)	300	600	174	83	48	66	38	25	14
Ca (mg/L)	75	200	174	70	40	79	45	25	14
Mg (mg/L)	30	100	174	89	51	71	41	14	8
Cl (mg/L)	250	1000	174	138	79	34	20	2	1
SO ₄ (mg/L)	200	400	174	149	86	18	10	7	4
NO ₃ (mg/L)	45	No relax	174	132	76			42	24
F (mg/L)	1	1.5	174	159	91	13	7	2	1

(Here, DL- Desirable Limit, MPL- Maximum Permissible Limit)

Table 4.2.3 Concentration of Chemical constituents in Deeper Aquifer

Parameter	Drinking water Standards (IS-10500-2012)		Total no of ground water samples	Deeper aquifer					
	DL	MPL		Samples (<DL)		Samples (DL-MPL)		Samples (>MPL)	
				No	%	No	%	No	%
pH	6.5-8.5	-	110	0	0	110	100	1	1
TDS(mg/L)	500	2000	110	54	49	50	45	6	5
TH(mg/L)	300	600	110	60	55	43	39	7	6
Ca (mg/L)	75	200	110	69	63	33	30	8	7
Mg (mg/L)	30	100	110	72	65	32	29	6	5
Cl (mg/L)	250	1000	110	79	72	31	28	0	0
SO ₄ (mg/L)	200	400	110	93	85	9	8	8	7
NO ₃ (mg/L)	45	No relax	110	88	80	22	20	0	0
F (mg/L)	1	1.5	110	79	72	16	15	15	14

4.5 Suitability of Ground Water for Irrigation

The water used for irrigation is an important factor in productivity of crop, its yield and quality of irrigated crops. The quality of irrigation water depends primarily on the presence of dissolved salts and their concentrations. The Electrical Conductivity (EC), Sodium Absorption Ratio (SAR) and Residual Sodium Carbonate (RSC) are the most important quality criteria, which influence the water quality and its suitability for irrigation.

Electrical Conductivity (EC)

The amount of dissolved ions in the water is best represented by the parameter electrical conductivity. The classification of water for irrigation based on the EC values is given in Table 4.3.1 and discussed as follows: -

Low Salinity Water (EC: 100-250 $\mu\text{S/cm}$): This water can be used for irrigation with most crops on most soils with little likelihood that salinity will develop.

Medium Salinity Water (EC: 250 – 750 $\mu\text{S/cm}$): This water can be used if moderate amount of leaching occurs. Plants with moderate salt tolerance can be grown in most cases without special practices for salinity control.

High Salinity Water (EC: 750 – 2250 $\mu\text{S/cm}$): This water cannot be used on soils with restricted drainage. Even with adequate drainage, special management for salinity control may be required and plants with good salt tolerance should be selected.

Very High Salinity Water (EC: >2250 $\mu\text{S/cm}$): This water is not suitable for irrigation under ordinary condition. The soils must be permeable, drainage must be adequate, irrigation water must be applied in excess to provide considerable leaching and very salt tolerant crops should be selected.

Table 4.3.1: Classification of Ground water for Irrigation based on EC values

S.No.	Water Quality Type	EC ($\mu\text{S/cm}$)	shallow aquifer		Deeper Aquifer	
			No. of samples	% of samples	No. of samples	% of samples
1	Low Salinity Water	< 250	9	5	3	3
2	Medium Salinity Water	>250-750	54	31	41	37
3	High Salinity Water	>750-2250	94	54	54	49
4	Very High Salinity Water	>2250	17	10	12	11
Total samples			174	100	110	100

In shallow and deep aquifer, maximum numbers of samples fall under the category of medium to high salinity type of water. The areas where very high salinity prevails (>2250 $\mu\text{S/cm}$) ground water can be used for irrigation for very high salt tolerant crops and with proper soil and crop management practices

Sodium Absorption Ratio (SAR)

Since Calcium and Magnesium will replace Sodium more readily than vice versa, the ratio reflects the Sodium hazard. The SAR indicates the relative activity of the Sodium ions in exchange reactions with the soil. The main problem with high sodium concentration is its effect on soil permeability; hardening of soil & water irrigation system. Sodium also contributes directly to the total salinity of the water and may be toxic to sensitive crops such as fruit trees. The higher value of SAR indicates soil structure damage.

In shallow aquifer, out of 174 samples analyzed no samples having SAR value more than 10. In deeper aquifer, out of 110 samples 1 sample is having SAR value more than 10 (Gatarwadi- Walwa taluka) The classification of ground water samples based on SAR values for its suitability for irrigation purpose is shown in **Table 4.3.2**

Table 4.3.2: Classification of Ground water for Irrigation based on SAR values

		SAR value							
Characteristics	Quality	Good < 10		Good to Permissible 10-18		Doubtful 18-26		Bad (Unsuitable) > 26	
	Total No of GW samples	No. of Samples and percentage of Samples							
		No	%	No	%	No	%	No	%
Shallow Aquifer	174	174	100	0	0	0	0	0	0
Deeper Aquifer	110	109	99	1	1	0	0	0	0
Total	284	283	199	1	1	0	0	0	0

Residual Sodium Carbonate (RSC):

Residual Sodium Carbonate (RSC) is considered to be superior to SAR as a measure of sodacity particularly at low salinity levels. Calcium reacts with bi-carbonate and precipitate as CaCO₃. Magnesium salt is more soluble and so there are fewer tendencies for it to precipitate. When calcium and magnesium are lost from the water, the proportion of sodium is increased resulting in the increase in sodium hazard. This hazard is evaluated in terms of RSC. The classification of ground water samples based on RSC values for its suitability for irrigation purpose is shown in **Table 4.3.3**.

Table-4.3.3 : Classification of Ground water for Irrigation based on RSC values.

Characteristics	Quality	RSC values (meq/L)					
		< 1.25		1.25-2.50		> 2.50	
	Total no of samples	Good		Doubtful		Bad (Unsuitable)	
	No	%	No	%	No	%	
Shallow Aquifer	174	167	96	7	4	0	0
Deeper Aquifer	110	104	94	4	4	2	2
Total	284	271	190	11	8	2	2

In shallow aquifer, it is observed that out of 174 samples only 7 samples show RSC values more than 1.25 meq/L indicating that the ground water of the area is not suitable for irrigation while in deeper aquifer, out of 110 samples only 2 samples show RSC more than 1.25 meq/L indicating that the ground water of the area is not suitable for irrigation. 2 samples of deeper aquifer namely, Landgewadi and Muchandi show RSC values more than 2.5 meq/L which is unsuitable for irrigation

5. GROUND WATER RESOURCES

5.1 Ground Water Resources – Aquifer -I

Central Ground Water Board and Ground Water Survey and Development Agency (GSDA) have jointly estimated the ground water resources of Sangli district based on GEC-97 methodology. Taluka wise ground water resources are given in **table5.1.1**, and graphical representations of the resources on the map are shown in **Figure-5.1.1**

Table 5.1.1:Ground water resources(MCM), Aquifer-I Sangli district (2020)

Assessment Unit Name/Block	Annual Extractable Ground Water Recharge	Current Annual Ground Water Extraction(MCM)				Annual GW Allocation for Domestic Use as on 2025	Net Ground Water Availability for future use	Stage of Ground Water Extraction(%)	Categorization (OE/Critical/Semicritical/Safe)
		Irrigation Use	Industrial Use	Domestic Use	Total Extraction				
ATPADI	116.08	62.49	0.00	5.30	67.80	5.30	48.29	58.40	safe
JAT	255.28	168.67	0.00	6.89	175.55	6.89	79.73	68.77	safe
KADEGAON	135.00	75.25	0.00	2.39	77.64	2.39	57.36	57.51	safe
KAVATHE MAHANKAL	117.04	87.19	0.00	4.24	91.43	4.24	25.61	78.12	semi_critical
KHANAPUR	123.92	38.57	0.00	1.74	40.31	1.74	83.61	32.53	safe
MIRAJ	159.01	88.73	0.00	2.71	91.44	2.71	67.57	57.51	safe
PALUS	72.09	27.42	0.00	1.18	28.61	1.18	43.48	39.68	safe
SHIRALA	67.63	18.74	0.00	2.94	21.68	2.94	45.95	32.05	safe
TASGAON	166.50	80.68	0.00	2.40	83.08	2.40	83.42	49.90	safe
WALWA	92.05	45.21	0.00	2.90	48.11	2.90	43.94	52.27	safe
Total	1304.60	692.95	0.00	32.70	725.65	32.70	578.95	55.62	

It has been estimated that the Net annual ground water availability in Sangli district is 1304.60 MCM. The existing ground water draft for all uses is 725.65 MCM. The net annual ground water availability for future irrigation is 578.95 MCM. The provision for domestic and industrial water supply for year 2025 is projected as 32.70 MCM. The average stage of ground water development is 55.62% (**Table 8.1**).

The stage of ground water Extraction varies from 32.05 % (Shirala) to 78.12 % (Kavate Mahankal). Out of 10 talukas Kavate Mahankal taluka is categorised as “semi-critical”. Care should be taken before taking further development in these talukas. There is much scope of ground water development in Khanapur taluka where stage of ground water development is only 32.05 %. Thus the stage of ground water development in the district is 55.62 % that make it under “Safe” category. Talukawise wise resources computation indicate that out of 10 Talukas 1 Talukas is “semi-critical”, and 9 comes under “safe” category.

Taluka wise Ground Water Resources (March 2020) is shown in **Fig.5.1.1**.

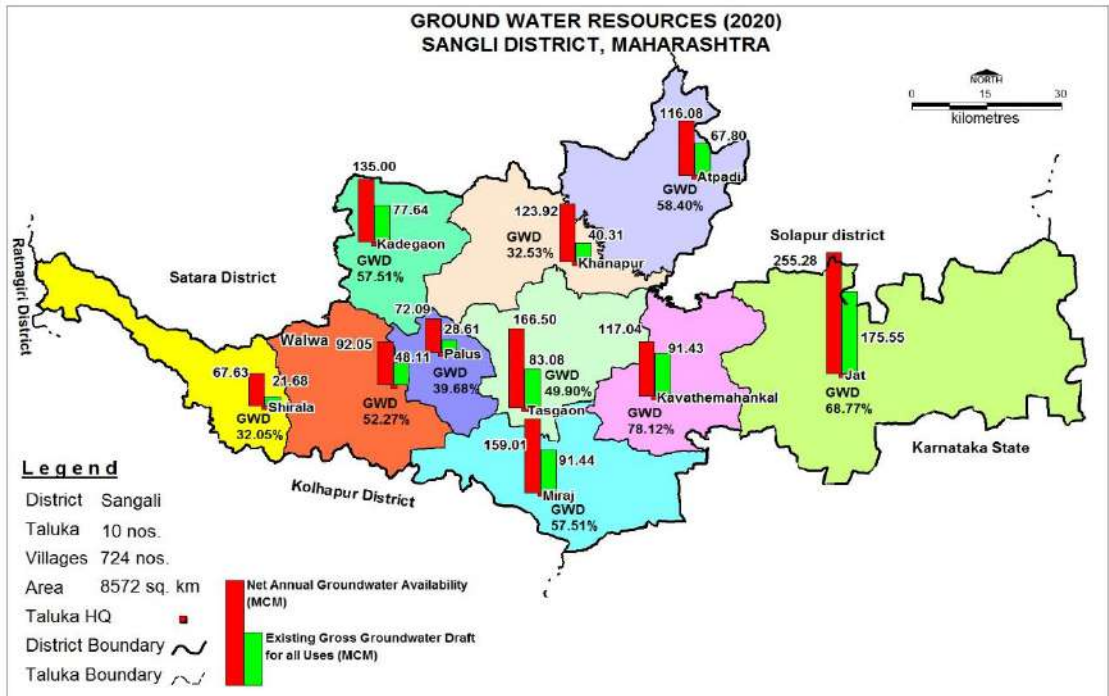
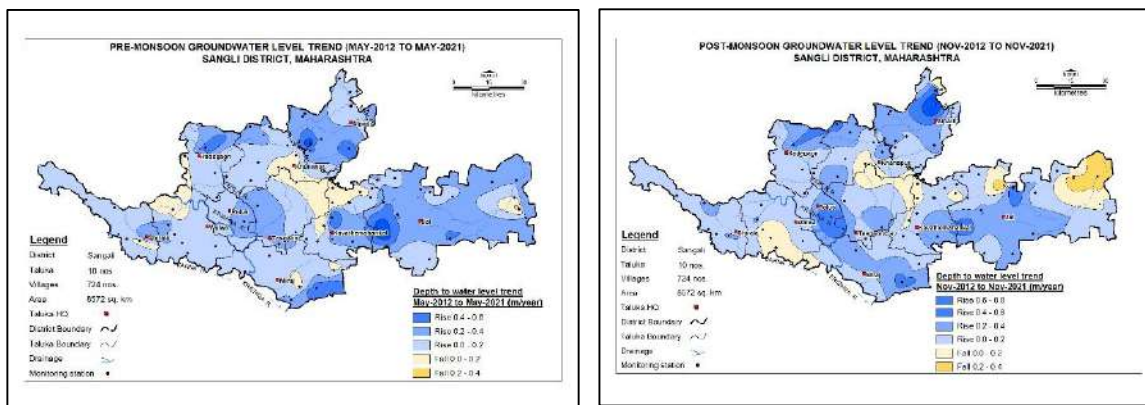


Fig 5.1.1: Groundwater Resources, Sangli District (2020)

6. GROUND WATER RELATED ISSUES

In the district there are few Ground Water related issues which are discussed below in



details over the period of time.

The ground water exploitation has resulted in decline of water levels over the period of time. In premonsoon season, declining water level trend has been observed mostly in Central part and also in the form of isolated patches in the area. Significant decline more than 0.20 m/year has been observed in area covering major part of Jath, Khanapur Miraj and Shiral talukas. In post monsoon season, fall in water level trend has been observed in the major parts of the district covering northern, central, eastern and southern part. Significant decline more than 0.20 to 0.40 m/year has been observed in eastern part of the district in Jath Taluka.

6.1 Low Rainfall and Droughts

Sangli district receives low rain fall as it falls in Rain Shadow Zone (dry area on the lee side of mountains). The mountains block the passage of rain-producing weather systems casting a "shadow" of dryness behind them. The drought is observed in major part of the district.

6.2 Ground Water Quality

High concentration of Nitrate and Floride in parts of Kavthe Mahankal, Jath, Khanapur and Miraj talukas.

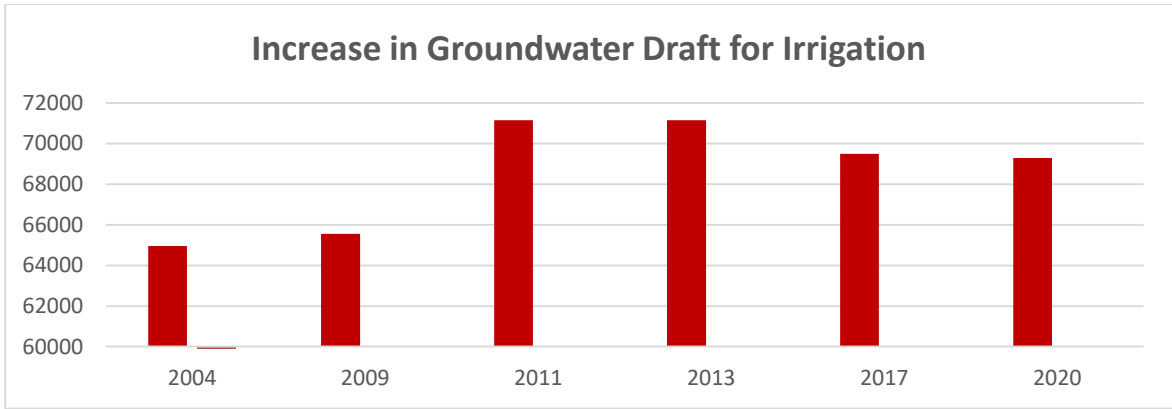
6.3 Low Ground Water Storage Potential

Low ground water potential areas have been identified in 7266 sq km (about 86%) in the Sangli District, where yield remains less than 50 m³/day, mostly due to limited depth of weathering and fractures in Aquifer-I (Basalt).

Limited aquifer potential of Aquifer-II (Basalt) is seen in about 5310 sq km (about 63%) in major part of the Taluka of Kavthe Mahankal and Jath of the Sangli district, having yield potential less than 1.0 lps

6.4 Increase in Irrigation Draft

The Irrigation Draft has increased from 64949 ham (2004) to 69295 ham (2020) has increased over the period of time from. The main reason for overdraft is intensive irrigation for cash crops.



7. GROUND WATER MANAGEMENT PLAN

The management plan has been proposed to manage the ground water resources and to arrest further decline in water levels. The management plan comprises two components namely supply-side management and demand side management. The supply side Management is proposed based on surplus surface water availability and the unsaturated thickness of aquifer whereas the demand side management is proposed by use of micro irrigation techniques and change in cropping pattern.

7.1 SUPPLY SIDE MANAGEMENT

The supply side management of ground water resources can be done through the artificial recharge of surplus runoff available within river sub basins and micro watersheds. Also, it is necessary to understand the unsaturated aquifer volume available for recharge. The unsaturated volume of aquifer was computed based on the area feasible for recharge, unsaturated depth below 5 mbgl and the specific yield of the aquifer. The **table 7.1.1** gives the district wise volume available for the recharge.

Table 7.1.1: Area feasible and volume available for Artificial Recharge

S.N	Taluka	Geographical Area (sq. km.)	Area feasible for recharge (Sq. km)	Unsaturated Volume (MCM)
1	Atpadi	849.23	413.14	2392.06
2	Jat	2247.61	1926.51	5513.15
3	Kadegaon	569.82	53.41	94.87
4	Kavathe Mahankal	749.53	493.13	1397.13
5	Khanapur	509.18	383.21	2225.07
6	Miraj	954.06	76.15	144.85
7	Palus	314.58	0.00	0.00
8	Shirala	718.68	0.00	0.00
9	Tasgaon	893.15	549.90	47.98
10	Walwa	766.15	148.66	0.00
	Total	8571.99	4044.11	11815.11

The total unsaturated volume available for artificial recharge is 11815.11 MCM and it ranges from 47.98 MCM in Tasgaon taluka to 5513.15 MCM in Jath taluka. The available surplus runoff can be utilized for artificial recharge through construction of percolation tanks and Check dams at suitable sites. The number of recharge percolation tanks, and check dams are decided based on the number of suitable streams available in the district.

Thus, after taking into consideration all the factors, only 54.56 MCM of surplus water can be utilised for recharge, which is given in **table 7.1.2**. This surplus water can be utilized for constructing 546 check dams and 191 percolation tanks at suitable sites. The number of feasible artificial recharge structures was calculated by considering 0.20 MCM per percolation tanks, 0.03 MCM per check dam. This intervention should lead to recharge @ 75% efficiency of about 40.92 MCM/year. Tentative locations of these structures are given in **fig. 7.1.1** and details also given in annexure IX and X

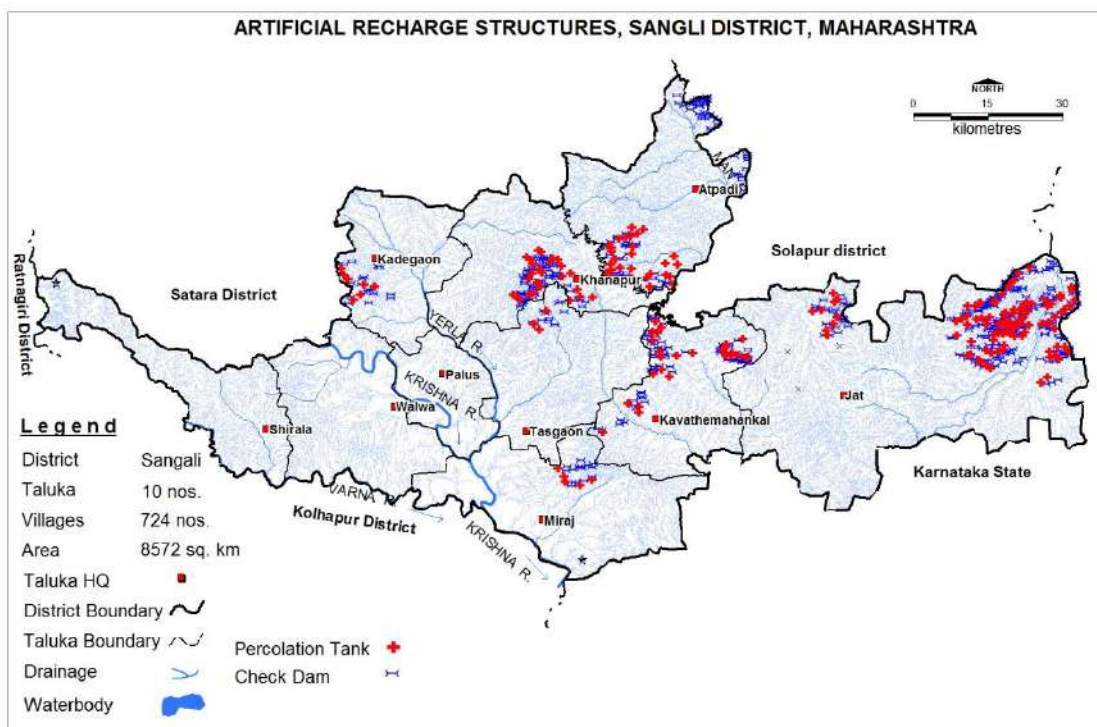


Figure 7.1.1: Proposed Artificial Recharge structures

The rainwater harvesting in urban areas can be adopted in 25% of the household with 50 Sq. m roof area. A total of 4.748 MCM potential can be generated by taking 80% runoff coefficient

Table 7.1.2: Proposed Recharge Structures

Taluka	Geographical Area (Sqkm)	Area feasible for recharge (sq. km.)	Unsaturated Volume (MCM)	Surplus water available for AR (MCM)	Proposed number of structures		Total recharged @ 75 % efficiency (MCM)
					PT	CD	
Atpadi	849.23	413.14	2392.06	8.02	28	80	6.01
Jat	2247.61	1926.51	5513.15	27.39	96	274	20.54
Kadegaon	569.82	53.41	94.87	1.90	7	19	1.42
Kavathe Mahankal	749.53	493.13	1397.13	7.44	26	74	5.58
Khanapur	509.18	383.21	2225.07	7.40	26	74	5.55
Miraj	954.06	76.15	144.85	1.45	5	15	1.09
Palus	314.58	0.00	0.00	0.00	0	0	0.00
Shirala	718.68	0.00	0.00	0.00	0	0	0.00
Tasgaon	893.15	549.90	47.98	0.96	3	10	0.72

Walwa	766.15	148.66	0.00	0.00	0	0	0.00
Total	8571.99	4044.11	11815.11	54.56	191	546	40.92

7.2 DEMAND SIDE MANAGEMENT

Demand side interventions such as change in cropping pattern has not been proposed in the area cash crop cultivation drives the economy of the region. However, as discussed earlier, there is a scope for increasing areas under micro-irrigation techniques like drip irrigation (about 107.00 sq km area of sugarcane to be covered under Drip). Volume of Water expected to be saved is estimated as 60.99 MCM in sugarcane crop (Sugarcane Surface Flooding irrigation req- 2.45 m. Drip Req. - 1.88, WUE- 0.57 m) area proposed for drip irrigation is presented in **table 7.2.1**

Table 7.2.1 Demand side intervention

Block	Geographical Area (Sqkm)	Proposed to be covered under Drip (sq.km.)	Volume of Water expected to be saved (MCM)	Total Volume of Water expected to be saved (MCM)
		Sugarcane crop area		
ATPADI	849.23	10.00	5.70	5.70
JAT	2247.61	7.00	3.99	3.99
KADEGAON	569.82	10.00	5.70	5.70
KAVATHE MAHANKAL	749.53	20.00	11.40	11.40
KHANAPUR	509.18	10.00	5.70	5.70
MIRAJ	954.06	10.00	5.70	5.70
PALUS	314.58	10.00	5.70	5.70
SHIRALA	718.68	10.00	5.70	5.70
TASGAON	893.15	10.00	5.70	5.70
WALWA	766.15	10.00	5.70	5.70
Total	8571.99	107.00	60.99	60.99

7.3 EXPECTED BENEFITS

The impact of groundwater management plans on the groundwater system in the district after its implementation is evaluated and the outcome shows significant improvement in groundwater scenario in all blocks as given in the **Table 7.3.1**

Table 7.3.1: Expected benefits after management options

Block	Water Recharged by Supply side intervention (MCM)	Water saving by demand side interventions (MCM)	Net Ground water availability (MCM)	Total ground water draft (MCM)	Ground water resources after supply side management (MCM)	Ground water Draft after demand side management (MCM)	Expected stage of Development (%)
Atpadi	6.01	5.70	116.08	67.80	122.10	62.10	50.86
Jat	20.54	3.99	255.28	175.55	275.82	171.56	62.20
Kadegaon	1.42	5.70	135.00	77.64	136.42	71.94	52.73
Kavathe Mahankal	5.58	11.40	117.04	91.43	122.62	80.03	65.27
Khanapur	5.55	5.70	123.92	40.31	129.48	34.61	26.73
Miraj	1.09	5.70	159.01	91.44	160.10	85.74	53.55
Palus	0.00	5.70	72.09	28.61	72.09	22.91	31.78
Shirala	0.00	5.70	67.63	21.68	67.63	15.98	23.63
Tasgaon	0.72	5.70	166.50	83.08	167.22	77.38	46.27
Walwa	0.00	5.70	92.05	48.11	92.05	42.41	46.08
Total	40.92	60.99	1304.60	725.65	1345.52	664.66	45.91

7.4 DEVELOPMENT PLAN

The ground water development plan is recommended to bring the stage of development upto 70%. Balance ground water resources available for ground water development after the stage of is bought up to 70% after implementing above measures is 271.39 MCM

The development plan is proposed to bring stage of ground water development up to 70 % and details are given in **table 7.4.1.** and **fig 7.4.1** and the Gist of Management Plan is depicted in **Fig. 7.4.2.**

Table 7.4.1: Ground water development plan

Taluka	Net Ground water availability (MCM)	Ground water resources after supply side management (MCM)	Ground water Draft after demand side management(MCM)	Expected stage of Development %	Balance GWR available for GW Development after STAGE OF GWD is brought to 70% (MCM)	Proposed No. of DW @1.5 ham for 90% of GWR Available)	Proposed No. of BW @1.5 ham for 10% of GWR Available)	Additional Area (sq.km.) proposed to be brought under assured GW irrigation with av. CWR of 0.65 m after 70% stage of GWD is achieved (Sq.Km)
Atpadi	116.08	122.10	62.10	50.86	23.37	1402	234	35.95
Jat	255.28	275.82	171.56	62.20	21.51	1291	215	33.09
Kadegaon	135.00	136.42	71.94	52.73	23.55	1413	236	36.23
Kvathe Mahankal	117.04	122.62	80.03	65.27	0	0	0	0
Khanapur	123.92	129.48	34.61	26.73	56.03	3362	560	86.2
Miraj	159.01	160.10	85.74	53.55	26.33	1580	263	40.51
Palus	72.09	72.09	22.91	31.78	27.55	1653	276	42.38
Shirala	67.63	67.63	15.98	23.63	31.36	1882	314	48.25
Tasgaon	166.50	167.22	77.38	46.27	39.67	2380	397	61.03
Walwa	92.05	92.05	42.41	46.08	22.02	1321	220	33.88
Total	1304.60	1345.52	664.66	45.91	271.39	16284	2715	417.52

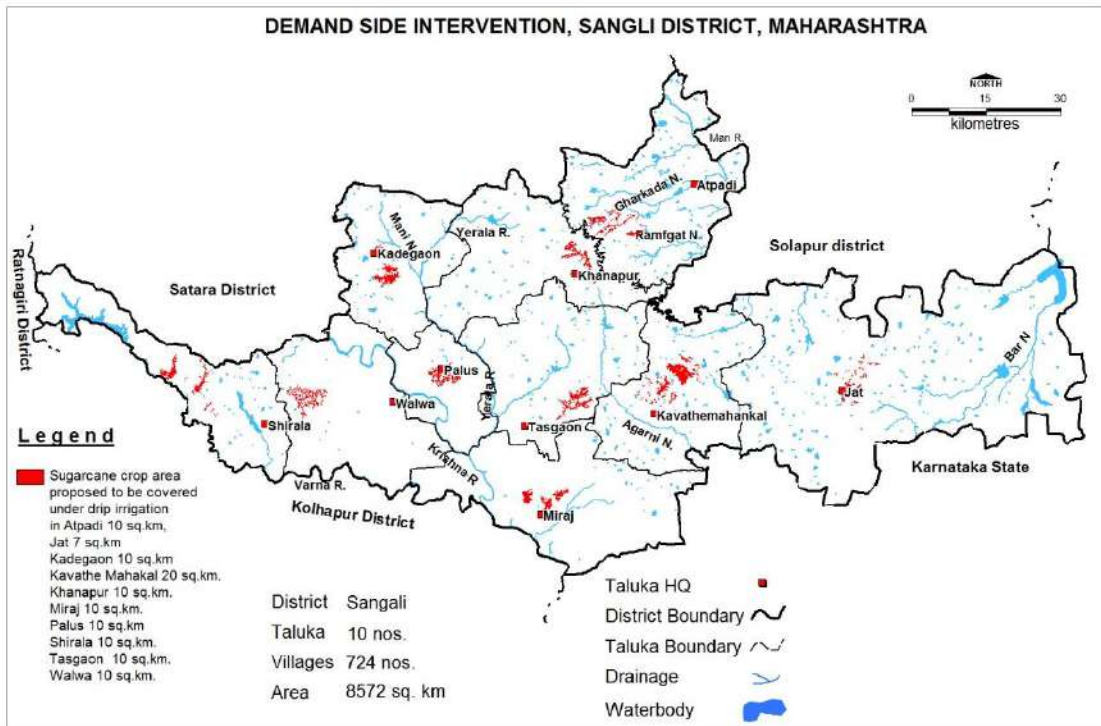


Figure 7.4.1: Demand side intervention

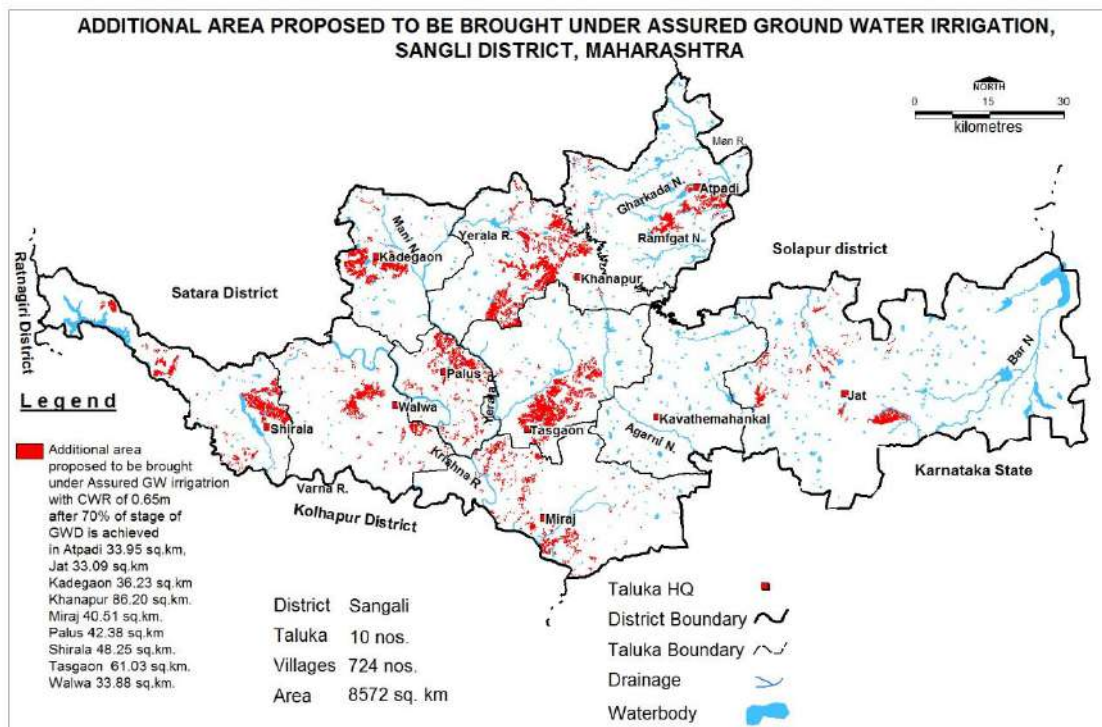


Figure 7.4.2 : Additional area under Assured GW irrigation.

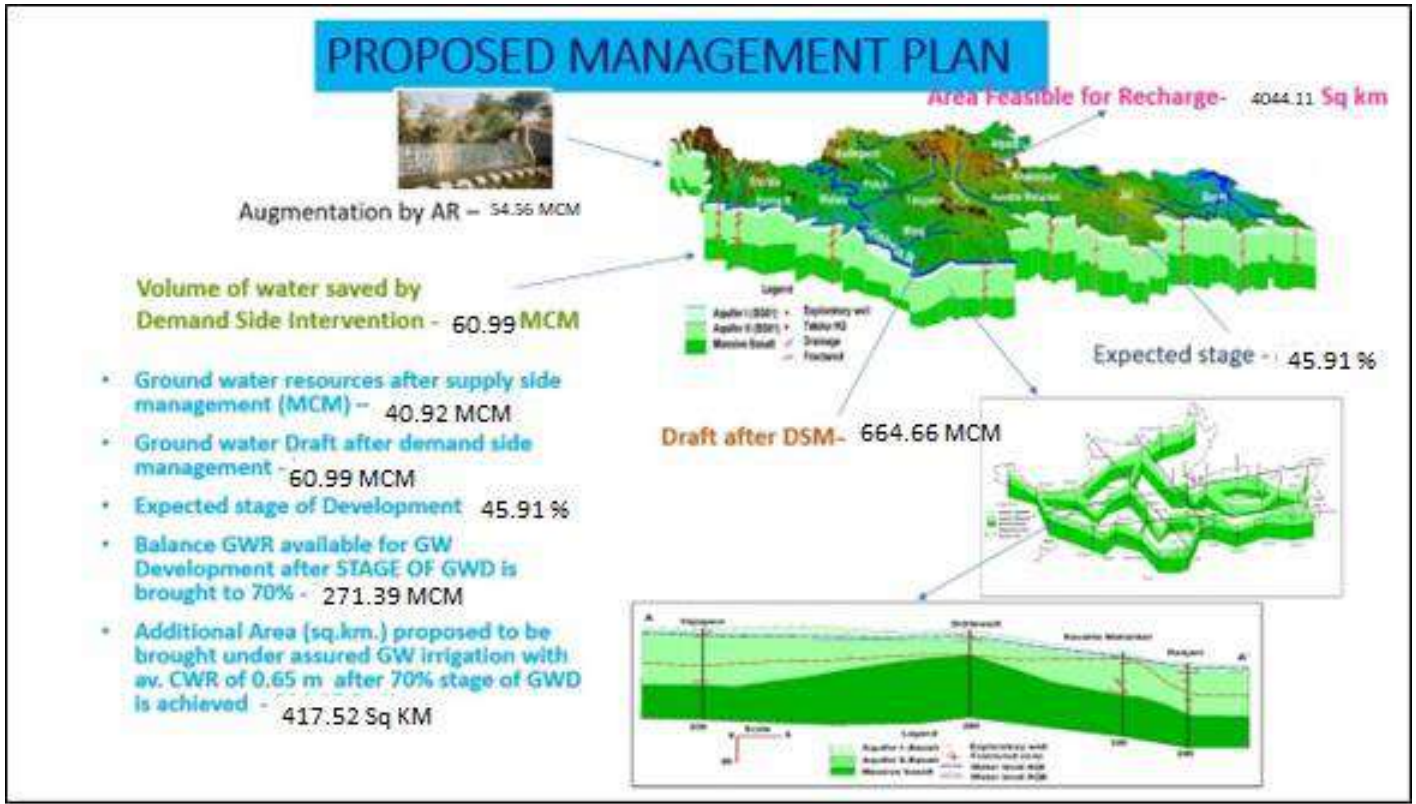


Figure 7.4.3 : Gist of Management Plan

8. SUM UP

A thorough study was carried out based on data gap analysis, data generated in-house, data acquired from State Govt. departments and GIS maps prepared for various themes. All the available data was brought on GIS platform and an integrated approach was adopted for the preparation of taluka wise aquifer maps and aquifer management plans of Sangli district.

Sangli district is one of the five districts of Pune division of Maharashtra State that form the region of Western Maharashtra, with a geographical area of 8572 sq. km. The district headquarters is located at Sangli Town. For administrative convenience, the district is divided into 10 talukas viz., Shirala, Walwa, Palus, Khanapur, Atpadi, Jat, Kadegaon, Tasgaon, Miraj and Kavathe Mahakal. There are 8 towns and 728 villages in the district out of which only 3 villages are not habited. The district has 1 Municipal Corporation, 4 Municipalities, 10 Panchayat Samities and 705 Gram Panchayats. It has a total population of 28, 22,143 as per 2011 census. The major part of the district comes under Krishana basin.

Physiographically the district shows a hilly and undulating terrain, with altitude ranging between 476 and 1104 m above MSL. The average rainfall is about 586.8 mm. The district falls in drought prone areas, receives rainfall of 500 to 600 mm.

Deccan Trap Basalt of upper Cretaceous to lower Eocene age is the major rock formation in the district, whereas only a very narrow belt confined to the banks of rivers is underlain by Recent Alluvium. Alluvium and Basalt form main aquifers in the district. Two aquifer Systems in Basalt and one shallow aquifer in Alluvium (limited to river banks) are found to be prevailing in the district. Deccan basalts are hydrogeologically in-homogeneous rocks. The weathered and jointed /fractured parts of the rock, as also permeable inter-flow beds constitute the zone of ground water storage and flow.

As per earlier studies, the specific capacity of the wells tapping Deccan Trap Basalt ranges between 1.6 and 5 lps/m of draw down and the permeability ranges from 12 to 65 m/day and the transmissivity ranges from 2.1 to 51.86 m²/day. The specific yield ranges from 0.019 to 0.028. During the pumping tests conducted on the exploratory wells tapping aquifer-II, the transmissivity was found to vary from 10 to 90 m²/day. The storage coefficient varied between 1.2×10^{-4} to 3.57×10^{-4} .

The depth to water levels in Sangli district during May 2021 ranges between 0.30 (Atpadi village, Atpadi Taluka) and 15.50 mbgl (Pandharewadi village, Atpadi Taluka). The depth to water levels less than 5 mbgl are observed in the major parts of the district nearby some canal command and riverfed areas covering almost all the talukas except Tasgaon Taluka. The depth to water levels between 5 to 10 mbgl are also observed in the major parts of the district covering almost all the talukas except Palus Taluka. The depth to Water levels more than 10 mbgl are observed as patches in Atpadi and Jath talukas

The depth to water levels in Sangli district during Nov 2021 ranges between 0.2 (Atpadi village, Atpadi Taluka) and 12.20 mbgl (Pandharewadi village, Atpadi Taluka). Shallow water levels within 2 m bgl are observed in the parts of Shirala taluka and nearby some canal command and river fed areas and also observed in Atpadi, Walwa and Kavthe Mahankal talukas and in the form of patches in Kadegaon, Khanapur and Palus and Miraj Talukas. Water levels between 2 and 5 m bgl are observed in almost 60% of the district area covering major part of Khanapur, Kavthe Mahankal, Jath Talukas and observed in

smaller extent in Palus, Shirala and Tasgaon talukas. Coming from west to east the water level is going deeper. Water level between 5 to 10 mbgl are observed in northern part of the Jath and also predominantly in parts of Kavthe Mahankal taluka and in patches in Atpadi, Kadegaon talukas. Northern part of Atpadi taluka observes the water level between 10 to 20 mbgl.

In Deeper Aquifer-II, the pre-monsoon depth to water levels, in Sangli District range from 12.00 (Achaknali, Walwa taluka) to 95.00 mbgl (Kalambi, Miraj taluka). The depth to water level less than 20 mbgl is observed only in isolated parts of Shirala and Jath talukas. The major parts of sangli district show depth to water level between 20 and 30 mbgl. During post monsoon depth to water levels range between 4.5 (Madhav Nagar, Miraj taluka) and 45.00 mbgl (Sidhewadi, Jath taluka). Depth to water level less than 10 m bgl has been observed in the southern and south-central part of the district and in parts of Shirala, Miraj, Jath and Atpadi talukas. The major part of the district shows deeper water levels ranging between 10 and 20 mbgl.

It has been estimated that the Net annual ground water availability in Sangli district is 1304.60 MCM. The existing ground water draft for all uses is 725.65 MCM. The net annual ground water availability for future irrigation is 578.95 MCM. The provision for domestic and industrial water supply for year 2025 is projected as 32.70 MCM. The average stage of ground water development is 55.62 %

The stage of ground water development varies from 32.05 % (Shirala) to 78.12 % (Kavate Mahankal). Out of 10 talukas Kavate Mahankal taluka is categorised as “semi-critical”. Care should be taken before taking further development in these talukas. There is much scope of ground water development in Khanapur taluka where stage of ground water development is only 32.05 %. Thus the stage of ground water development in the district is 55.62 % that make it under “Safe” category. Talukawise wise resources computation indicate that out of 10 Talukas 1 Talukas is “semi-critical”, and 9 comes under “safe” category.

Talukawise aquifer management plans have been prepared for Aquifer I (Weathered and jointed fractured Basalt) with the objective of bringing the current stage of ground water development up to 70% by adopting supply side and demand interventions. The management plan has been proposed to manage the ground water resources and to arrest further decline in water levels. The management plan comprises two components namely supply-side management and demand side management. The supply side Management is proposed based on surplus surface water availability and the unsaturated thickness of aquifer whereas the demand side management is proposed by use of micro irrigation techniques. Change in cropping pattern towards less water-intensive irrigation crops (Demand side intervention) has not been proposed in the area as cash crop cultivation drives the economy of the region. The supply side interventions include utilizing 54.56 MCM of surplus water can be utilised for recharge. This surplus water can be utilized for constructing 546 check dams and 191 percolation tanks at suitable sites.

This supply side intervention should lead to recharge (@ 75% efficiency) of about 40.92 MCM/year. The demand side interventions include proposal to bring 100 % ground water irrigated about 107.00 sq km area of sugarcane is proposed to be covered under Drip. Volume of Water expected to be saved is estimated as 60.99 MCM in sugarcane crop

Balance ground water resources available for ground water development is 271.39 MCM after the stage of ground water development is brought down to 70% after

implementing demand side management, which can bring additional 417.2 sq. km. area under assured ground water irrigation.

These interventions also need to be supported by regulation of deeper aquifer and hence it is recommended to regulate/ban deeper tubewells/borewells of more than 60 m depth in these talukas, so that the deeper ground water resources are protected for future generation and also serve as ground water sanctuary in times of distress/drought. Capacity building activities need to be aggressively propagated to establish the institutional framework for participatory ground water management.

Annexures

Annexure-I: Salient Features of Ground Water Exploration

Sr. No.	Village	Taluka	Type of well	Latitude	Longitude	Elevation	Depth drilled (mbgl)	Depth of casing (mbgl)	DTW Pre Monsoon (mgbl)	DTW Post Monsoon (mgbl)	Depth of occurrence AQI(mbgl)	Depth of occurrence AQII(mbgl)	Massive	Fractured rocks Thickness AQII
1	Ranjani	Kavathe Mahankal	EW	16.982	74.946	618.7	200	29.5	93	42	30	163	200	4
2	Shigaon	Kavathe Mahankal	EW	16.876	74.359	553.4	200	5.75	35	16	18	90	200	2
3	Ghatnandre	Kavathe Mahankal	EW	17.174	74.867	785	200	5.8	13.5	8	23	101	200	6
4	Ghatnandre	Kavathe Mahankal	OW	17.174	74.867	785	98.9	5.8	33.63	21	23	100	98.9	6
5	Shelkewadi	Kavathe Mahankal	EW	17.098	74.896	721.6	200	5.8	20	11	18	123.3	200	9
6	Shelkewadi	Kavathe Mahankal	OW	17.098	74.896	721.6	123.3	5.8	19	12	27	124	123.3	9
7	Kavthe Mahankal	Kavathe Mahankal	EW	17.007	74.868	634	200	7.1	24.7	16	15	140	200	6
8	Arewadi	Kavathe Mahankal	EW	17.113	74.949	666.8	200	5.8	45.5	21	12	80	200	4
9	Alkud (M)	Kavathe Mahankal	EW	16.981	74.759	691.4	136	5.8	35	16	15	90	136	1
10	Alkud (M)	Kavathe Mahankal	EW	16.981	74.759	691.4	200	5.8	35	17	15	90	200	4
11	Alkud (M)	Kavathe Mahankal	OW	16.981	74.759	691.4	95.8	5.8	53.2	21	18	78	95.8	4
12	Kokale	Kavathe Mahankal	EW	16.986	75.026	606	200	5.8	18	5.3	16	135	200	1

Sr. No.	Village	Taluka	Type of well	Latitude	Longitude	Elevation	Depth drilled (mbgl)	Depth of casing (mbgl)	DTW Pre Monsoon (mgbl)	DTW Post Monsoon (mgbl)	Depth of occurrence AQI(mbgl)	Depth of occurrence AQII(mbgl)	Massive	Fractured rocks Thickness AQII
13	Ghorpadi	Kavathe Mahankal	EW	17.180	74.978	626	200	5.6	21	15	15	172	200	9
14	Belanki	Miraj	EW	16.860	74.868	642.7	200	29.5	85.5	24	30	92	200	1
15	Bolvad	Miraj	EW	16.809	74.690	567.7	200	29.5	78	45	30	153	200	1
16	Madhav Nagar	Miraj	EW	16.887	74.582	550	200	29.5	21	4.5	30	85	200	1
17	Kalambi	Miraj	EW	16.899	74.692	612.3	200	5.8	55	35	18	173	200	1
18	Arag	Miraj	EW	16.795	74.809	603	200	5.8	25	12	15	135	200	1
19	Malwadi	Miraj	EW	16.985	74.484	560	200	5.75	21	11	15	132	200	1
20	Mirajwadi	Miraj	EW	16.947	74.431	564.3	200	5.8	35	21	15	142	200	3
21	Vanjarwadi	Tasgaon	OW	17.078	75.585	515.4	105.3	29.5	37	21	30	75	105.3	2
22	Vanjarwadi	Tasgaon	EW	17.078	75.585	515.5	200	29.5	40	26	30	70	200	1
23	Siddewadi	Jath	EW	17.145	74.771	705.5	200	29.5	89	45	30	60	200	1
24	Darikonur	Jath	EW	17.022	75.373	611.8	200	29.5	75	41	30	190	200	1
25	Kontev Boblad	Jath	EW	16.998	75.634	579.8	200	17.5	61	28	30	96	200	1
26	Yelavi		EW	17.207	75.300	548.5	200	29.5	82	34	30	166	200	1
27	Ravalgundwadi	Jath	EW	16.978	75.287	686.3	200	29.5	82	31	30	181	200	1
28	Halli	Jath	EW	17.202	75.581	502.5	186.4	17.5	57.4	21	17	107	186.4	6

Sr. No.	Village	Taluka	Type of well	Latitude	Longitude	Elevation	Depth drilled (mbgl)	Depth of casing (mbgl)	DTW Pre Monsoon (mgbl)	DTW Post Monsoon (mgbl)	Depth of occurrence AQI(mbgl)	Depth of occurrence AQII(mbgl)	Massive	Fractured rocks Thickness AQII
29	Vejegaon	Khanapur	EW	17.373	74.588	708.1	200		81	34	20	182	200	2
30	Vibhutewadi	Bhum	EW	17.454	74.713	668.8	153.75	8.25	18	5.4	27	160	153.75	5
31	Diganchi	Washi	EW	17.534	74.912	565.9	159.5	3	23	11	27	160	159.5	6
32	Diganchi	Washi	OW	17.534	74.912	565.9	159.5	3	21	12	27	90	159.5	1
33	Achaknalli	Walwa	EW	17.083	74.233	566	150.4	3.2	12	5.45	18	84	150.4	9
34	Nidhal	Atpadi	EW	17.461	74.839	620.7	150	3	23	13	21	110	150	1
35	Arag	Miraj	EW	16.795	74.809	603	200	5.8	21	11	22	105	200	2
36	Biloshi	Shirala	EW	16.994	74.024	611.6	200	5.8	22	12.1	15	90	200	1
37	Gatadwadi	Walwa	EW	16.998	74.318	567	200	17.6	50	27	16	85	200	2
38	Ghorpadi	Kavathe Mahankal	EW	17.181	74.977	626	200	5.6	23	15	18	98	200	9
39	Karajgi	Jath	EW	17.121	75.575	498.7	200	5.8	14	5.1	20	140	200	7
40	Kasegaon	Walwa	EW	17.128	74.190	571.4	200	5.6	21	13	21	135	200	4
41	Madgyal	Jath	EW	17.135	75.417	572.4	200	5.2	30	15	25	90	200	2
42	Malwadi	Palus	EW	16.985	74.484	560	200	5.75	21	10	21	75	200	1
43	Mirajwadi	Walwa	EW	16.947	74.431	564.2	200	5.8	50	21	16	110	200	3
44	Mokashiwadi	Jath	EW	17.196	75.167	562.2	200	5.8	23	12	18	125	200	3
45	Muchandi	Jath	EW	16.982	75.333	660.4	200	5.8	14	5.5	21	90	200	2
46	Shigaon	Walwa	EW	16.876	74.359	555	200	5.75	19	8	19	80	200	3
47	Shirala	Shirala	EW	16.971	74.134	598.4	200	5.7	24	19.5	19	110	200	3
48	Tandulwadi	Walwa	EW	17.263	75.600	474	200	5.8	21	5.2	22	120	200	2
49	Umadi	Jath	EW	17.263	75.600	474	200	5.75	22	15.2	15	130	200	6
50	Valsang	Jath	EW	17.058	75.321	667.3	159.9	5.65	35	21	25	90	159.9	6
51	Dhebewadi	Patan	EW	17.1217	73.9479	617	201.5	16	14	5.5	15	90	201.5	1
52	Morgiri	Patan	EW	17.2314	73.7755	612	200	10	19	8	18	120	200	2

Annexure-II: Salient Features of Ground Water Exploration (AAP 2021-22).

Sr. No	Village	Type of Well	Latitude	Longitude	Toposheet	Depth drilled (mbgl)	Length of casing (m)	Zones	Discharge (lps)	Aquifer	SWL (mbgl)	EC
53	Dhanewadi	EW	17.3181	74.3881	47K/7	200.00	7" (177.8) Length – 6.00	38.10-41.10, 105.20-108.20	3.17	Fractured Basalt	10.32	829
54	Dhanewadi	OW	17.3982	74.3881	47K/7	129.60	7" (177.8) Length – 6.00	38.10-41.10)-.78lps (105.20-108.20)-2.16lps	2.16	Fractured Basalt	10.28	874
55	Nevari	EW	17.3177	74.4807	47K/8	200.00 (DRY)	7" (177.8) Length – 6	(DRY)	(DRY)	Fractured Basalt	>100	-
56	Devrashtre	EW	17.1740	74.3908	47K/8	200.00	7" (177.8) Length – 12.20	10.60 -13.70 (35-38.10)	0.78	Fractured Basalt	49.28	999
57	Bambwade	EW	17.0915	74.4985	47K/4	200.00 (DRY)	7" (177.8) Length – 18.00	(DRY)	(DRY)	Fractured Basalt	>100	498
58	Khirwade	EW	17.0419	74.9958	47K/7	200.00	7" (177.8) Length - 12	38.10-41.10	3.17	Fractured Basalt	26.04	218
59	Khirwade	OW	17.0426	73.9890	47K/4	117.40	7" (177.8) Length - 12	35-38.10	1.37	Fractured Basalt	28.77	311
60	Nelkaranji	EW	17.2919	74.7898	47K/7	123.50	7" (177.8) Length – 12.20	47.20-50.30 50.30-53.30 59.40-62.50	10.98	Fractured Basalt	24.98	1177
61	Nelkaranji	OW	17.2658	74.7810	47K/15	129.50	7" (177.8) Length – 12.00	47.20-50.30 50.30-53.30 5.94 59.40-62.50	10.98	Fractured Basalt	25.01	650
62	Vithlapur	EW	17.2856	74.7810	47K/15	200	7" (177.8) Length – 12.00	138.00-144.00	0.38	Fractured Basalt	>100	717
63	Patrewadi	EW	17.5219	74.9331	47K/14	200	7" (177.8) Length – 12.00	No water bearing	Dry	Fractured Basalt	>100	-

Annexure-III: Soil Infiltration Test Data

Date	03-02-2022						
Unique ID No	SITNQSangli-2						
Location	Dhanewai-Open Space of Grampnchayat 200 m South of OHT.						
Taluka	Kadegaon						
District	Sangli						
Coordinates	17 3928, 74 3902						
Elevation / RL (mamsl)	724.12						
Initial Water Level	15.5						
Geology	Deccan Basalt						
Sl.No.	Clock time	Duration(m)	Cumulative time	Water	Infiltrated	Infiltration	Remarks
			(minutes)	level	water	rate(cm/hr)	
				depth(cm)	Depth(cm)		
1	15.20	0	0	15.50	0.00	0.00	
2	15.25	5	5	12.80	2.70	32.40	
3	15.30	5	10	14.6	0.60	7.20	
4	15.35	5	15	15.2	1.20	14.40	
5	15.45	10	25	15.1	1.10	6.60	
6	15.55	10	16	15.3	1.30	7.80	
7	16.05	10	45	15.3	1.30	7.80	
8	16.20	15	60	15.4	1.40	5.60	
9	16.35	15	75	15.40	1.40	5.60	
10	16.50	15	90	15.40	1.40	5.60	
11	17.05	15	105	15.40	1.40	5.60	

Date	03-02-2022						
Unique ID No	SITNQSangli-1						
Location	Nevri - In the ground near the haouse of SH Suresh Shinde.						
Taluka	Kadegaon						
District	Sangli						
Coordinates	17 3044, 74 5049						
Elevation / RL (mamsl)	692.35						
Initial Water Level	12.4						
Geology	Deccan Basalt						
Sl.No.	Clock time	Duration(m)	Cumulative time	Water	Infiltrated	Infiltration	Remarks
			(minutes)	level	water	rate(cm/hr)	
				depth(cm)	Depth(cm)		
1	17.35	0	0	12.40	0.00	0.00	
2	17.40	5	5	10.5	1.90	22.80	
3	17.45	5	10	10.4	2.00	12.00	
4	17.55	10	20	10.1	2.30	6.90	
5	18.05	10	30	10.7	1.70	3.40	
6	18.20	10	16	10	2.40	9.17	
7	18.35	10	50	10.7	1.70	2.04	
8	18.50	10	60	10.7	1.70	1.70	
9	19.00	10	75	10.70	1.70	1.36	
10	19.10	10	90	10.70	1.70	1.13	

Annexure-IV: Details of Water Level of Ground water monitoring wells.

Sn	Tahsil	Village	Watershed	Toposheet	Well depth	Longitude	Latitude	Swl_pre_2021	Swl_post_2021
1	Atpadi	Atpadi	BM-113	47K15	7.7	74.94	17.42888889	0.3	0.2
2	Atpadi	Bombewadi	BM-105	47O/03	12.1	75.00361111	17.43527778	3.75	2.6
3	Atpadi	Dhavawadi	BM-114	47K15	6	74.77611111	17.31611111	2.8	2.4
4	Atpadi	Kharsundi	BM-113	47K/05	16.75	74.7775	17.34055556	8.9	6.5
5	Atpadi	Mitki	BM-113	47K15	13	74.82138889	17.35888889	4.9	0.9
6	Atpadi	Pandharewadi	BM-103	47K14	20.4	74.9375	17.53944444	15.5	12.5
7	Atpadi	Parekarwadi	BM-104	47K15	10	74.74805556	17.44666667	6.55	4.4
8	Atpadi	Pimpari Kh.	BM-105	47O/03	7.8	75.00888889	17.46805556	4.7	0.9
9	Atpadi	Rajewadi	BM-103	47K14	17.7	74.89361111	17.59055556	7.4	4.1
10	Atpadi	Shetphale	BM-114	47K15	9	74.93444444	17.32333333	2	1
11	Atpadi	Umbargaon	BM-103	47K14	11.4	74.96388889	17.54166667	7.15	0.9
12	Atpadi	Vithalapur	BM-104	47K15	14	74.94083333	17.48611111	7.6	5.6
13	Atpadi	Zare	BM-104	47K15	10.8	74.75583333	17.45694444	7.8	6
14	Jat	Antral	BM-118	47O/04	12.2	75.2175	17.16861111	5.5	1.6
15	Jat	Bagewadi	BM-118	47O/04	9.1	75.125	17.07222222	2.5	0.8
16	Jat	Bevanur	BM-116	47O/04	10.5	75.04583333	17.20416667	6.2	4.6
17	Jat	Borgi bk.	BM-122	47O12	7.6	75.59111111	17.13611111	7	4
18	Jat	Dafalapur	KR-38	47O/04	12.8	75.07222222	17.00111111	6.5	5.15
19	Jat	Dhavawadi	BM-117	47O/04	5.7	74.77611111	17.31611111	1.8	1.2
20	Jat	Halli	BM-121	47O12	10.3	75.6	17.20361111	6.9	2.45
21	Jat	Jadraboblal	BM-120	47O/08	12.9	75.43472222	17.225	8	5.7
22	Jat	Lavanga	BM-122	47O12	7.15	75.64	17.05777778	3.6	0.5
23	Jat	Morbaji	BM-122	47O12	7.6	75.61027778	17.09361111	6	2.8
24	Jat	Muchandi	BM123	47P/05	11.5	75.33611111	16.98055556	6.45	4.9
25	Jat	Nigadi kh.	BM-119	47O/08	7	75.27361111	17.11805556	4.7	1.6
26	Jat	Sanamadi	BM-119	47O/08	9	75.345	17.14027778	5.8	2.25
27	Jat	Sankh	BM123	47O12	13	75.50194444	17.07055556	10.9	6.5

28	Jat	Umarani	KR-53	47P/05	10.7	75.25333333	16.90194444	10	4.8
29	Jat	Utagi	BM-121	47O12	10.4	75.50222222	17.19638889	10	5.3
30	Jat	Vajrawad	KR-52	47P/01	14.5	75.13888889	16.90472222	12.7	9.5
31	Jat	Vhaspeth	BM-121	47O/08	8.9	75.39833333	17.11194444	7	5.3
32	Jat	Waifale	BM-112	47O/08	11.1	75.24778333	17.16363333	8.5	3.45
33	Jat	Walekhindi	BM-117	47O/04	12.2	75.11527778	17.21083333	7.4	7.3
34	Kavathe-mahankal	Alkud (M)	KR-39	47L13	10.7	74.76305556	16.97888889	6	2.9
35	Kavathe-mahankal	Chorochoi	BM-117	47O/04	7.3	75.01944444	17.1375	5.85	3.5
36	Kavathe-mahankal	Deshing	KR-39	47L13	9.5	74.80638889	16.97055556	2.5	1.1
37	Kavathe-mahankal	Dudhebhavi	BM-116	47O/04	11.6	75.025	17.17138889	6.4	4.15
38	Kavathe-mahankal	Ghatnandre	BM-115	47K16	13.5	74.86611111	17.17305556	10.5	7.5
39	Kavathe-mahankal	Hingangaon	KR-39	47L13	13	74.865	16.97777778	8.6	2.2
40	Kavathe-mahankal	Kerewadi	KR-39	47K16	8.8	74.93138889	17.12	6.5	3
41	Kavathe-mahankal	Kokale	KR-38	47P/01	9.4	75.02361111	16.99	4.1	3.1
42	Kavathe-mahankal	Kuchi	KR-37	47K16	11	74.86444444	17.05972222	4	3.5
43	Kavathe-mahankal	Kundlapur	KR-36	47K16	6.7	74.86555556	17.11805556	2.1	1
44	Kavathe-mahankal	Landgewadi	KR-36	47K16	11	74.83111111	17.03111111	2.45	1.4
45	Kavathe-mahankal	Nagaj	BM-115	47K16	11.8	74.93666667	17.11722222	10.05	8.5
46	Kavathe-mahankal	Nimaj	BM-116	47K16	8.8	74.97666667	17.15833333	4.2	2.4
47	Kavathe-mahankal	Ranjani	KR-37	47L13	12.9	74.94638889	16.96861111	9.1	5.7
48	Kavathe-mahankal	Shirdhon1	KR-36	47K16	17.9	74.81275	17.02313889	4.5	1.1
49	Kadegaon	Hanmantvadiye	KR-25	47K07	9.6	74.43805556	17.28083333	3.5	3
50	Kadegaon	Kadegaon	KR-22	47K07	13.8	74.33333333	17.3	9.65	6.7
51	Kadegaon	Khambale Aundh	KR-22	47K07	14.1	74.27861111	17.29444444	1.9	0.6
52	Kadegaon	Saholi	KR-22	47K07	14.6	74.3576	17.32726667	7.5	5.75
53	Kadegaon	Sonsal1	KR-33	47K/08	17.1	74.28856667	17.21996667	5.5	2.6
54	Kadegaon	Wangi	KR-33	47K08	13.5	74.39722222	17.23055556	6.1	5.6
55	Khanapur	Balvadi	KR-36	47K11	10.7	74.72111111	17.29888889	8.8	6.2
56	Khanapur	Bhalwani	KR-34	47K/08	11.4	74.44305556	17.21638889	3.5	3

57	Khanapur	Bhaurayachiwadi	KR-24	47K11	11.1	74.61666667	17.40611111	6.8	4.9
58	Khanapur	Bhood	KR-25	47K11	8.9	74.6875	17.33583333	4.6	4
59	Khanapur	Ghoti Kh.	KR-35	47K12	11	74.65277778	17.25333333	9.1	4.8
60	Khanapur	Karve	KR-34	47K12	11.8	74.54111111	17.20194444	8.3	3.3
61	Khanapur	Mahuli	KR-24	47K12	12.9	74.53805556	17.40638889	7.8	4.5
62	Khanapur	Sulewadi	KR-34	47K11	10.1	74.57083333	17.27083333	3.25	1.6
63	Khanapur	Vejegaon	KR-25	47K11	15.1	74.59166667	17.37527778	8	4.2
64	Miraj	Arag	KR-51	47L13	12.5	74.80361111	16.79166667	4.35	3.25
65	Miraj	Bedag	KR-50	47L/09	12.9	74.73611111	16.79722222	7.3	1.7
66	Miraj	Belanki	KR-51	47L13	8.7	74.87222222	16.86138889	3.5	2.25
67	Miraj	Kavalapur	KR-40	47L/09	20.8	74.61472222	16.91527778	8	3.8
68	Miraj	Mhaisal	KR-50	47L10	13	74.70194444	16.74666667	5.6	3.75
69	Miraj	Sawalwadi	KR-48	47L/05	13.2	74.41944444	16.86805556	4	1.7
70	Palus	Kumbhargaon	KR-32	47K08	9.4	74.40583333	17.13694444	2.55	2
71	Palus	Yelavi	KR-32	47K12	14.8	74.51388889	17.04583333	5	2.4
72	Shirala	Bilashi	KR-44	47L/01	13.8	74.01388889	16.99722222	4.4	2.2
73	Shirala	Biur	KR-43	47L/01	11.5	74.09722222	16.97222222	2.7	1.3
74	Shirala	Mandur	KR-28	47G16	4.4	73.88472222	17.12916667	1.55	0.3
75	Shirala	Rile	KR-44	47L/01	5.8	74.04583333	16.97888889	1.7	1.15
76	Shirala	Sawantwadi	KR-44	47G16	5.5	73.99722222	17.09861111	2.9	0.4
77	Shirala	Shirala1	KR-43	47L/01	12.8	74.13731667	16.98613333	5.1	1.7
78	Tasgaon	Kumathe	KR-40	47L/09	13	74.65333333	16.96	10.6	5.2
79	Tasgaon	Shirgaon Visapur	KR-35	47K12	13	74.56805556	17.10666667	7.4	5.7
80	Tasgaon	Yogewadi	KR-39	47K12	10.4	74.72	17.00472222	5.9	4.6
81	Walwa	Ashta	KR-41	47L/05	12	74.39972222	16.95138889	7.6	1.15
82	Walwa	Itakare	KR-48	47L/05	14.2	74.26666667	16.96388889	6.2	3.4
83	Walwa	Nerle	KR-42	47K/04	13.1	74.22916667	17.09166667	2.3	0.8
84	Walwa	Rethare Dharan	KR-42	47K/04	8.9	74.21111111	17.03333333	5.2	3.4
85	Walwa	Shivpuri	KR-41	47L/01	10.4	74.23611111	16.99638889	4	1.9

86	Walwa	Tandulwadi	KR-48	47L/05	13.7	74.28888889	16.925	4.4	2.55
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Annexure-V: long term trend of Water Level (Pre-Monsoon-2021)

S.No.	Tahsil	Village	Longitude	Lattitude	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Pre_Trend
1.	Atpadi	Zare	74.7558	17.4569	10.2	10.8	9.3	9.5	9.9	8.175	9.5	8.7	8		0.2671
2.	Jat	Borgi bk.	75.5911	17.1361	7.3	7.3	7.3	6.9		8.15	7.3	7.3	7.3	7	0.0041
3.	Jat	Waifal	75.2556	17.1583	10.225	12.2	11.4	10.5	10	13.2	12.8	9.2	9.1		0.1333
4.	Kavathe-mahankal	Ranjani	74.9464	16.9686	12.8	12.9	11.075		11.3	12.4	12.7	12.6	11	9.1	0.2192
5.	Miraj	Bedag	74.7361	16.7972	8.2		6.1	3.9	8.2	7.4	6.8	7	6.85	7.3	-0.0306
6.	Walwa	Rethare Dharan	74.2111	17.0333	8.9	8.9	7.15		7.1	7.3	6.4	6.9	7.5	5.2	0.2921
7.	Atpadi	Shetphale	74.9344	17.3233	6.55	8.1	2.7	2.9	4.65	4.1	4.3	4	2.3	2	0.4327
8.	Atpadi	Dhavadvadi	74.7761	17.3161	6	6	5.5	3.3	3.55	3.55	2.4	3	2.6	2.8	0.4109
9.	Atpadi	Bombewadi	75.0036	17.4353	5.7	5.7	5.7	5	5.7	5.7	5.7	5.7	5.7	3.75	0.0936
10	Atpadi	Pimpari Kh.	75.0089	17.4681	7.8	7.8	7.6	7.4	7.05	7.8	5.2	7.3	5.5	4.7	0.3112
11	Atpadi	Mitki	74.8214	17.3589	6.9	11	7.5	7.7	5.45	6.2	6	7	6.6	4.9	0.3373
12	Atpadi	Parekarwadi	74.7481	17.4467	8.9	9.75	7.9	7.2	8.1	7	7.1	7.5	5.7	6.55	0.3206
13	Atpadi	Umbargaon	74.9639	17.5417	11	11	5.1	6.6	11	11	10.1	11	7.2	7.15	0.1288

14	Atpadi	Rajewadi	74.8936	17.5906	9.4	9.4	4.5	7.8	8.1	9.4	9.4	5.8	5.5	7.4	0.1982
15	Atpadi	Vithalapur	74.9408	17.4861	9.3	9.3	9.1	7.5	9.3	9.3	9.2	9.2	9.2	7.6	0.0630
16	Atpadi	Kharsundi	74.7775	17.3406	13.925	16.7	14.4	11.8	11.6	12.0	12.3	11.5	9.1	8.9	0.6725
17	Atpadi	Pandharewadi	74.9375	17.5394	16.2	18.8	19.2	16.3	19.5	18.6	18.5	19.7	16	15.5	0.1073
18	Jat	Dhavadvadi	75.0714	17.1192	5.7	4.9	3.3	3.6	3.2	3.4	2.9	3	1.3	1.8	0.3861
19	Jat	Bagewadi	75.1250	17.0722	6.025	8.4	5.3	5.6	6.3	6.2	5.1	3.7	5.3	2.5	0.3820
20	Jat	Lavanga	75.6400	17.0578	6.6	6.6	4.175	5.1	6.6	6.3	6.1	6.6	3.2	3.6	0.2180
21	Jat	Antral	75.2175	17.1686	5.475	7.1	10.7	5.9	6.7	6.9	6.1	3.1	4	5.5	0.3556
22	Jat	Sanamadi	75.3450	17.1403	9	8.1	6.3	7.1	9	9	6.7	9	5.8	5.8	0.1976
23	Jat	Morbaji	75.6103	17.0936	7.1	1.9	5.275	5.9	7.1	7.1	7	7.1	7.1	6	-0.2359
24	Jat	Bevanur	75.0458	17.2042	9.5	9.5	9.5	8.4	9.5	9.5	9.5	9.1	8.8	6.2	0.2018
25	Jat	Muchandi	75.3361	16.9806	10.825	11.5	8.975	9.5	9.4	11.3	8.4	11	6.2	6.45	0.4106
26	Jat	Dafalapur	75.0722	17.0011	12.8	12.8	9.25	10.1	8.7	8.8	8.5	11.2	3.3	6.5	0.7161
27	Jat	Halli	75.6000	17.2036	9.25	9.6	8.525	8.5	8.1	9.6	9.2	8.8	6.8	6.9	0.2168
28	Jat	Walekhindi	75.1153	17.2108	10	9.3	9.3	9.3	9.3	10	9.2	9.3	9.3	7.4	0.1394
29	Jat	Umarani	75.2533	16.9019	10.7	10.7	10.3	10	10.7	10.7	10.5	10.7	10.5	10	0.0255
30	Jat	Utagi	75.5022	17.1964	10.3	10.3	10.3	9.8	10	10.3	9.8	10.3	5.15	10	0.2330
31	Jat	Vajrawad	75.1389	16.9047	14.3	14.5	12.8	12.6	14.5	14.5	13.2	14.5	12	12.7	0.1309
32	Kadegaon	Khambale Aundh	74.2786	17.2944	2.8	1.8	4.25	2.6	4.05	4.6	3.9	5.8	1.3	1.9	-0.0036
33	Kadegaon	Yelavi	74.5139	17.0458	6.975	9.4	7.7	6.8	8.1	7.1	6.2	8.7	5.2	5	0.2726
34	Kavathe- mahankal	Kundlapur	74.8656	17.1181	3.15	4	2.125	3.3	6.3	5.4	4.2	6.3	5.2	2.1	-0.1311
35	Kavathe- mahankal	Landgewadi	74.8311	17.0311	3.2	1.35	1.95	3.8	5.4	2.9	1.7	4.1	3.1	2.45	-0.0452
36	Kavathe- mahankal	Deshing	74.8064	16.9706	4.625	3.45	2.55	2.9	3.4	3.2	4.2	6.2	3.05	2.5	-0.0002
37	Kavathe- mahankal	Kuchi	74.8644	17.0597	11	11	10.15	8.3	11	11	9.5	11	6.2	4	0.5379

38	Kavathe-mahankal	Nimaj	74.9767	17.1583	5.6	6.2	5.425	5.7	7.5	7.3	7.05	6.8	7.1	4.2	-0.0268
39	Kavathe-mahankal	Chorochoi	75.0194	17.1375	7.3	6.3	5.7	7.1	7.3	7	7.2	7.3	6.7	5.85	0.0136
40	Kavathe-mahankal	Alkud (M)	74.7631	16.9789	10.5	9	7.15	3.1	9	9.4	8.2	9.1	7.2	6	0.1676
41	Kavathe-mahankal	Dudhebhavi	75.0250	17.1714	5.75	9.8	6.1	5.8	7.1	7	7.8	7.5	6.8	6.4	0.0136
42	Kavathe-mahankal	Kerewadi	74.9314	17.1200	6.05	8.8	5.125	5.9	4.25	8.6	6.9	8.8	8.2	6.5	-0.1550
43	Kavathe-mahankal	Hingangaon	74.8650	16.9778	10.325	8.9	8.15	6.1	9.7	8.7	9.5	8.2	4.65	8.6	0.2171
44	Kavathe-mahankal	Nagaj	74.9367	17.1172	11.875	11.8	11.4	9.7	10.8	11	8.5	12.2	10.7	10.05	0.1426
45	Kavathe-mahankal	Ghatnandre	74.8661	17.1731	9.825	13	10.15	8.9	12.7	12.5	12.1	12.4	10.2	10.5	-0.0432
46	Khanapur	Sulewadi	74.5708	17.2708	5.85	5.2	5.45	5.1	4.85	6.7	6.1	7	4.5	3.25	0.0952
47	Khanapur	Bhalwani	74.4431	17.2164	5.65	5	4.65	4.9	4.95	3.4	3.7	7.96	2.9	3.5	0.1373
48	Khanapur	Bhood	74.6875	17.3358	6.55	6.5	6.4	5.8	7.1	6.7	5.3	7	6.09	4.6	0.1171
49	Khanapur	Bhaurayachiwadi	74.6167	17.4061	9.2	8.1	7.125	6.8	7.2	6.7	7.05	8.3	8.1	6.8	0.0938
50	Khanapur	Mahuli	74.5381	17.4064	12.9	12.9	12.9	9.8	7.8	9.5	11	12.9	11.75	7.8	0.2948
51	Khanapur	Vejegaon	74.5917	17.3753	9.6	13.3	8.775	7.4	13.5	14.1	13.5	7.2	8.3	8	0.2326
52	Khanapur	Karve	74.5411	17.2019	9.375	9.15	9.2	8.3	7.6	9.3	9.3	9.3	7.7	8.3	0.0886
53	Khanapur	Balvadi	74.7211	17.2989	9.225	9.2	8.7	8.1	10	9.1	9.35	10.5	9.1	8.8	-0.0444
54	Khanapur	Ghoti Kh.	74.6528	17.2533	8.2	10	9.7	8.3	8.4	9.6	7.5	10.4	9.8	9.1	-0.0545
55	Miraj	Belanki	74.8722	16.8614	3.15	3.3	2.85	4.3	4.8	3	3	4	3.2	3.5	-0.0152
56	Miraj	Sawalwadi	74.4194	16.8681	4.5	6.6	3	3.1	5	5.2	3.9	3.5	2.6	4	0.1661
57	Miraj	Arag	74.8036	16.7917	7.7	7.7	7.15	7.4	7.35	3.3	5.6	4.1	3.6	4.35	0.5064
58	Miraj	Mhaisal	74.7019	16.7467	9.925	8.2	7.175	7	7	8.3	6.5	7.6	8.5	5.6	0.2115

59	Miraj	Kavalapur	74.6147	16.9153	10.025	10.2	9.125	8.2	10.3	10.05	10.2	10.6	10.1	8	0.0352
60	Palus	Kumbhargaon	74.4058	17.1369	2.35	3.5	4.275	2.9	3.3	3	3.7	3	1.5	2.55	0.0998
61	Palus	Hanmantvadiye	74.4381	17.2808	4.525	4.3	5	4.3	4.9	4.1	3.9	4.6	4.9	3.5	0.0547
62	Palus	Wangi	74.3972	17.2306	7.85	7	8.2	7.2	7.05	6.4	7.3	7.8	6.7	6.1	0.1224
63	Palus	Soholi	74.3600	17.3264	11	10.5	10.575	9.1	14.6	10.05	10.6	9.8	3.95	7.5	0.4926
64	Palus	Kadegaon	74.3333	17.3000	10.4	10.7	8.575	7.8	11.4	11.5	8.3	9.5	9.1	9.65	0.0711
65	Shirala	Mandur	73.8847	17.1292	1.2	2.3	2	1.9	3.1	1.2	0.9	1.1	0.9	1.55	0.0973
66	Shirala	Rile	74.0458	16.9789	2.225	2.1	2.4	3.2	2.25	2.6	1.9	2.7	2.3	1.7	0.0326
67	Shirala	Biur	74.0972	16.9722	3.2	1.7	3.1	3.2	8.6	6.9	5.3	3.2	2.6	2.7	-0.0418
68	Shirala	Sawantwadi	73.9972	17.0986	3.3	3.3	3.5667	3.5	3.7	3.1	3.25	4	3.25	2.9	0.0190
69	Shirala	Bilashi	74.0139	16.9972	4.95	5.1	4.8	4.1	6.8	4.7	5.2	4.7	4.4	4.4	0.0555
70	Shirala	Shirala	74.1347	16.9847	7.6	8.9	8.5	8.1	8.1	5.1	7.2	6.5	4.7	5.1	0.4097
71	Tasgaon	Yogewadi	74.7200	17.0047	7.525	9.6	8.325	7.5	4.8	8.7	8.5	9.6	6.2	5.9	0.1524
72	Tasgaon	Shirgaon Visapur	74.5681	17.1067	9.325	9.85	8.5	7.6	7.6	7.2	8	7.7	3.725	7.4	0.3842
73	Tasgaon	Kumathe	74.6533	16.9600	13	13	12.05	13	13	13	11.6	11.7	11.6	10.6	0.2264
74	Walwa	Nerle	74.2292	17.0917	2.1	3.3	2.75	3.5	4.35	3.2	3	3.2	4.2	2.3	-0.0467
75	Walwa	Shivpuri	74.2361	16.9964	5	5.9	4.8	3.9	4.8	5.1	4.2	4.3	4.9	4	0.1048
76	Walwa	Tandulwadi	74.2889	16.9250	5.325	6.5	5.2	2.3	7.75	7.5	4.6	5.2	5.9	4.4	0.0356
77	Walwa	Itakare	74.2667	16.9639	7.075	7.4	5.35	4.9	8.8	4.2	6.2	5.85	6.2	6.2	0.0877
78	Walwa	Ashta	74.3997	16.9514	7.9	11.2	6.8	3.8	11.8	7.9	6.8	9.3	6.8	7.6	0.0964

Annexure-VI : long term trend of Water Level (Post Monsoon-2021)

Taluka	Site Name	Longitude	latitude	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Post_Trend
Atpadi	Bombewadi	75.00361	17.43528	5.7	2.9	3.45	4.6	4.8	4.9	5.7	5.7	2	2.6	0.1185
Atpadi	Dhavawadi	74.77611	17.31611	2.4	1.3	2.35	1.9	0.6	2.2	3.3	1.8	0.5	2.4	0.0155
Atpadi	Kharsundi	74.7775	17.34056	10.3	6.3	8	8.1	6.1	6.2	10.3	5.7	2.8	6.5	0.3848
Atpadi	Mitki	74.82139	17.35889	3.7	0.9	2.9	1.5	0.4	3.5	2.7	1.5	0.3	0.9	0.1800
Atpadi	Pandharewadi	74.9375	17.53944	19.91	13.5	13.65	15.45	16.5	16.9	19	16.8	6	12.5	0.5599
Atpadi	Parekarwadi	74.74806	17.44667	7.9	4.2	3.9	5.15	4.7	4.1	8.15	2.4	0.9	4.4	0.3255
Atpadi	Pimpari Kh.	75.00889	17.46806	3.6	2	2.25	2.6	0.9	2.2	5.1	2.6	0.8	0.9	0.1342
Atpadi	Rajewadi	74.89361	17.59056	4.7	3.9	3.2	3.4	4	4.5	7.8	4.5	0.9	4.1	0.0376
Atpadi	Shetphale	74.93444	17.32333	5.7	0.1	0.3	2.2	0.9	0.8	2.3	1	0.6	1	0.2127
Atpadi	Umbargaon	74.96389	17.54167	1.1	0.9	1.3	0.9	0.7	1.2	5		0.7	0.9	-0.0672
Atpadi	Vithalapur	74.94083	17.48611	9.3	7.5	8.6		7.9	8.1	8.7	1.5	0.2	5.6	0.7046
Atpadi	Zare	74.75583	17.45694	9.1	7.1	7.9	8.05	8.8	6.9	8.3	7.1	4	6	0.3318
Jat	Antral	75.2175	17.16861	3.8	3.2	1.8	3.4	1.35	3.2	7.5	4.1	9.9	1.6	-0.3197
Jat	Bagewadi	75.125	17.07222	5.6	0.5	0.5	3.4	3.1	2.1	3.5	1.9	0.5	0.8	0.2236
Jat	Bevanur	75.04583	17.20417	9.5	6.4	1.2	3.8	6.9	5.9	9.5	6.1	4.6	4.6	0.0976
Jat	Dafalapur	75.07222	17.00111	12.8	6.3	6.3	6.7	5.85	7.9	5.4	6.6	5.3	5.15	0.4618
Jat	Dhavawadi	75.07139	17.11917	1.3	1.4	1.2	1.6	1.45	1.2	1.3	1.2	0.6	1.2	0.0464
Jat	Halli	75.6	17.20361	1.8	2.5	2.1	1.6	1.85	1.8	6.8	6.7	2.8	2.45	-0.2818
Jat	Jadraboblad	75.435	17.225	11.3	6.6	5.1	5.85	10.9	8.8	6	11.2		5.7	0.0884
Jat	Lavanga	75.64	17.05778	3.6	1.3	0.6	2.75	0.9	0.7	3.9	2.9	0.3	0.5	0.1221
Jat	Morbagi	75.61028	17.09361	2.4		2.1	4	1.9	1.4	5.1	3.4	2.8	2.8	-0.0897
Jat	Muchandi	75.33611	16.98056	11.5	4.8	2.7	5.85	9.8	9.8	11.5	5.5	0.6	4.9	0.3506
Jat	Sanamadi	75.345	17.14028	4.05	2.3	3.3	4.65	3.65	3.2	4.2	5.1	1	2.25	0.1097
Jat	Umarani	75.25333	16.90194	10.7	6.2	6.1	9.8	3.8	10.7	10.7	9.6	4	4.8	0.2509
Jat	Utagi	75.50222	17.19639	5	3.3	5.1	6.1	4.5	4.9	9.3	9.1	4.7	5.3	-0.2576

Jat	Vajrawad	75.13889	16.90472	10.6	11	10.7	13.75	11.15	14.5	14.2	12.4	8.7	9.5	0.0776
Jat	Waifal	75.25556	17.15833	11.9	6.2		5.8	2.5	4.3	8.8	8.2	2	3.45	0.5504
Jat	Walekhindi	75.11528	17.21083	10	6.4	6.3	8.15	6.55	7.5	9.3	7.2	6.2	7.3	0.1018
Kadegaon	Yelavi	74.51389	17.04583	9.7	4.2	2.3	5.6	6.2	4.5	5.2	1.5	0.9	2.4	0.5800
Kavathe- mahankal	Alkud (M)	74.76306	16.97889	3.7	1.45	1.3	5.15	2.1	1.6	5.9	2.5	1.5	2.9	-0.0055
Kavathe- mahankal	Chorochoi	75.01944	17.1375	3.3	3.1	3.2	5.35	4.3	3.2	6.2	5.8	3.2	3.5	-0.1027
Kavathe- mahankal	Deshing	74.80639	16.97056	1.5	1.3	1.5	3.1	1.3	1.6	2.7	1.5	1	1.1	0.0400
Kavathe- mahankal	Dudhebhavi	75.025	17.17139	9.7	0.8	1.7	3.8	6.8	2.1	5.6	4.8	2	4.15	0.1536
Kavathe- mahankal	Ghatnandre	74.86611	17.17306	8.5	6.4	6.2	7.8	8.05	9.5	10.4	9.9	4	7.5	-0.0118
Kavathe- mahankal	Hingangaon	74.865	16.97778	5.4	3.4	3.6	6.4	3.35	6.3	7.1	4.2	2	2.2	0.1852
Kavathe- mahankal	Kerewadi	74.93139	17.12	5.1	5.1	3.2	4.9	5.2	6.7	8.2	5.9	1.8	3	0.1036
Kavathe- mahankal	Kuchi	74.86444	17.05972	7.5	5.8	3.5	7.45	3.9	8.4	10.5	7.6	2.3	3.5	0.1597
Kavathe- mahankal	Kundlapur	74.86556	17.11806	0.9	0.9	0.8	1.45	1.35	1.5	1.4	2.9	0.9	1	-0.0691
Kavathe- mahankal	Landgewadi	74.83111	17.03111		1.15	1.2	3.15	1.35	2.3	6.2	1.3	0.9	1.4	-0.0208
Kavathe- mahankal	Nagaj	74.93667	17.11722	11	8.2	7.9	10.3	9.25	10.1	11.5	10.2	5.7	8.5	0.1458
Kavathe- mahankal	Nimaj	74.97667	17.15833	4.6	2.8	2.4	4.85	4.2	3.5	4.8	2.8	0.9	2.4	0.1936
Kavathe- mahankal	Ranjani	74.94639	16.96861	11.7	5.4	7.1	10.52	6.7	12.5	11.7	7.5	3.6	5.7	0.3349
Khanapur	Balvadi	74.72111	17.29889	8.3	6.3	5.6	6.9	7.5	8.7	9.3	1.6	1.5	6.2	0.3885
Khanapur	Bhalwani	74.44306	17.21639	3.9	2.9	2.5	3.8	4.3	3.7	4	1.9	0.9	3	0.1521

Khanapur	Bhaurayachiwadi	74.61667	17.40611	6.1	5.1	5.6	6.3	5.7	5.3	7.2	4.5	0.9	4.9	0.2630
Khanapur	Bhood	74.6875	17.33583	4.1	4.2	3.4	4.95	4.65	4.6	4.7	3.5	2.7	4	0.0709
Khanapur	Ghoti Kh.	74.65278	17.25333	3.8	1.6	2.15	3.4	2.9	5.5	7.2	2.7	0.8	4.8	-0.1221
Khanapur	Karve	74.54111	17.20194	8.2	3.3	4.15	6.25	3.8	6.4	5.7	3.9	1.2	3.3	0.3582
Khanapur	Mahuli	74.53806	17.40639	9.9	6.5	6.7	6.3	5.3	5.9	10.2	6.6	2	4.5	0.4139
Khanapur	Sulewadi	74.57083	17.27083	3.2	1.4	1.2	3.4	3.55	2.4	3.2	0.8	1	1.6	0.1270
Khanapur	Vejegaon	74.59167	17.37528	6.6	4.4	4.9	7.9	5.4	5.6	5.4	4.2	1	4.2	0.3406
Miraj	Arag	74.80361	16.79167	6.2	5.4	5.4	3.9	5.65	3.5	3.2	2.4	1.7	3.25	0.4345
Miraj	Belanki	74.87222	16.86139	2.7	2.4	2.25	3.2	2.45	2.9	2.4	2	1.5	2.25	0.0821
Miraj	Kavalapur	74.61472	16.91528	6.5	5.2	5.4	5.7	2.35	6.6	6.9	5.1	1	3.8	0.2870
Miraj	Mhaisal	74.70194	16.74667	4.6	4	3.7	3.2	3.85	3.2	4.3	3.4	1.6	3.75	0.1412
Miraj	Sawalwadi	74.41944	16.86806	0.8	0.7	1.6	0.4	0.7	0.1	2.4	0.4	0.3	1.7	-0.0285
Palus	Hanmantvadiye	74.43806	17.28083	3.7	3.1	3.2	3.3	3.35	2.8	3.9	2.2	1	3	0.1500
Palus	Kadegaon	74.33333	17.3	7.8	6.7	5.6	7.45	7.7	6.7	7.5	6.6	4.6	6.7	0.1239
Palus	Khambale Aundh	74.27861	17.29444	1.25	1.4	1.2	1.5	3.9	1.3	4.7	1.7	0.5	0.6	0.0161
Palus	Kumbhargaon	74.40583	17.13694	2.8	2.1	2.4	2.7	2.4	2.5	3.1	2.7	0.4	2	0.0988
Palus	Soholi	74.36	17.32639	9.8	7	7.9	10.05	6.7	6.5	7	6.2	5	5.75	0.4139
Palus	Wangi	74.39722	17.23056	7	6.2	6.25	6.2	6.2	5.6	7.8	6.9	4	5.6	0.1245
Shirala	Bilashi	74.01389	16.99722	3.1	2.5	2.4	2.75	0.3	2.5	2.9	0.5	0.7	2.2	0.1670
Shirala	Biur	74.09722	16.97222	4.8	1.1	1.1	1	0.8	0.7	0.05		0.6	1.3	0.2454
Shirala	Mandur	73.88472	17.12917	0.9	0.7	0.7	1.1	0.85	0.6	1.05	0.4	0.4	0.3	0.0570
Shirala	Rile	74.04583	16.97889	1.9	1.8	1.5	2.7	1.95	2.5	2	1.5	0.9	1.15	0.0885
Shirala	Sawantwadi	73.99722	17.09861	2.2	2.4	2	1.3	2.25	1.3		1.2	0.5	0.4	0.2115
Shirala	Shirala	74.13472	16.98472	2.3	1.9	1.2	2.55	1.3	0.3	1.3	0.4	1	1.7	0.1239
Tasgaon	Kumathe	74.65333	16.96	10	2.2	3.3	6.55	8	9.5	10.4	8.1	2.4	5.2	0.0288
Tasgaon	Shirgaon Visapur	74.56806	17.10667	6.9	4.05	5.55	4.9	4.7	6.8	7	4.6	1	5.7	0.1727
Tasgaon	Yogewadi	74.72	17.00472	8.7	3.9	3.8	7.7	8.2	5.5	9.2	5.2	0.7	4.6	0.3061
Walwa	Ashta	74.39972	16.95139	2.2	1.1	0.7	1.05	1.1	1.4	2.3	1.2	0.6	1.15	0.0388
Walwa	Itakare	74.26667	16.96389	2.4	2.5	1.1	2.6	1.6	2.6	4.5	3.2	1	3.4	-0.0952

Walwa	Nerle	74.22917	17.09167	1.9	1.1	0.9	2	1.2	0.2	1.2	2	0.6	0.8	0.0685
Walwa	Rethare Dharan	74.21111	17.03333	4.5	4.4	3.1	5.1	4.9	4.7	4.6	2.9	1	3.4	0.2206
Walwa	Shivpuri	74.23611	16.99639	1	1.6	1	1.25	1.15	1.3	1	1.3	1.9	1.9	-0.0673
Walwa	Tandulwadi	74.28889	16.925	1.4	0.9	0.7	2.15	1.3	1.6	3.1	1.6	0.4	2.55	-0.0879

Annexure-VI : Details of GW monitoring wells and KOWs in Sangli district.

S.N	District	Taluka	Village	Agency name	Toposheet no	Altitude (amsl)	Depth (mbgl)	Diameter (m)	Geology	Aquifer	Lining	MP	WL	WL	EC May 17
											(mbgl)	(m agl)	May-17(mbgl)	Nov 2017(mbgl)	(µS/cm)
1.	Sangli	Jath	Ankale	CGWB	4704-3A	641	12	7	Basalt	FB	Nil	GL	Dry	6.3	917
2.	Sangli	Jath	Avandhi	CGWB	4704-1C	566	11.3	7	Basalt	WFB	Nil	GL	9.7	8.9	2700
3.	Sangli	Jath	Banali	CGWB	4704-2C	564	10.2	4*4	Basalt	FB	Nil	GL	10.4	6.1	762
4.	Sangli	Jath	Belunki	CGWB	4704-3B	650	11.3	7*7	Basalt	FMB	Nil	GL	5.9	8.9	679
5.	Sangli	Jath	Bevanur	CGWB	4704-1A	610	10	7	Basalt	FMB	6	GL	Dry	1	887
6.	Sangli	Jath	Birnal	CGWB	4704-2B	611	10	5.6	Basalt	WFB		0.6	6.1	4.9	965
7.	Sangli	Jath	Dafalapur	CGWB	4704-3A	625.5	3	3*3	Basalt	FB	2	1	5.4	GL	792
8.	Sangli	Jath	Daribadachi	CGWB	4708-3C	590	12	3.5	Basalt	FB	1	1	2	2.7	1317
9.	Sangli	Jath	Ekundi	CGWB	47P1-1B	606.4	10	3	Basalt	FB	8	1	Dry	6.9	710
10.	Sangli	Jath	Gholeswar	CGWB	4708-2A	609	10	5	Basalt	FB	6	GL	7.8	5.4	720
11.	Sangli	Jath	Girgaon	CGWB	47012-2B	537.7	8	11*7	Basalt	FMB	Nil	GL	8.7	5.9	2216
12.	Sangli	Jath	Gulvanchi	CGWB	4704-1A	590	8	10	Basalt	FB	2	2	7.5	1226	980
13.	Sangli	Jath	Hivare	CGWB	4704-2A	543	9	5.7	Basalt	FB	Nil	0.7	7.2	1.7	1719
14.	Sangli	Jath	Jadraboblal	CGWB	4708-1C	655	8	6	Basalt	FB	4	GL	4.97	4.9	982
15.	Sangli	Jath	Jath	CGWB	4704-3C	676	12.2	3.8	Basalt	FB	6.2	1	Dry	5.2	2019
16.	Sangli	Jath	Jirgyal	CGWB	47P1-1A	636.5	18.5	5*5	Basalt	WFB	nil	GL	9.8	15	550
17.	Sangli	Jath	Karajagi	CGWB	47012-2A	503	7.3	7	Basalt	WB	Nil	1	18.1	5.7	2231
18.	Sangli	Jath	Karajanagi	CGWB	4708-2A	664	10	8	Basalt	FB	5	GL	6.3	5.8	3540
19.	Sangli	Jath	Karewadi	CGWB	47012-3B	531	12.5	7	Basalt	FB	Nil	GL	8.2	5.9	852
20.	Sangli	Jath	Khairao	CGWB	4708-1B	553	15	Irregular	Basalt	FB	Nil	GL	6.2	6.6	1156
21.	Sangli	Jath	Khalati	CGWB	4704-3B	675.8	8	3	Basalt	FB	8	1	13.2	6.8	651
22.	Sangli	Jath	Khandnal	CGWB	4708-3C	547	11.5	7	Basalt	WB	4	0.7	7.2	10	1095
23.	Sangli	Jath	Kolgiri	CGWB	4708-2B	674	15	10	Basalt	FB	nil	Nil	10.2	12.6	730
24.	Sangli	Jath	Kontya Boblad	CGWB	47P9-1B	585	12.6	Irregular	Basalt	FB	Nil	0.3	14.2	5.9	1076
25.	Sangli	Jath	Kosari	CGWB	4704-1B	601	8.6	7	Basalt		Nil	GL	11.7	GL	810
26.	Sangli	Jath	Kudnur	CGWB	47P1-1A	601.4	10	5*5	Basalt	WFB	nil	GL	6.6	GL	3520
27.	Sangli	Jath	Kumbhari	CGWB	4704-2B	481	14	7	Basalt	FB	Nil	GL	6.2	8.2	1380
28.	Sangli	Jath	Kunikonur	CGWB	4708-1B	575	9.4	6.2	Basalt	FB	4	GL	12	6.9	650
29.	Sangli	Jath	Madgyal	CGWB	4708-2C	584	4	3	Basalt	WFB	3.5	1	9.2	1.2	564
30.	Sangli	Jath	Maithal	CGWB	4708-2B	597	10	5	Basalt	FB	nil	GL	Dry	GL	657
31.	Sangli	Jath	Mendhegiri	CGWB	47P1-1C	712	9	8*8	Basalt	WFB	nil	GL	6.7	7.9	1615
32.	Sangli	Jath	Navalwadi	CGWB	4704-1B	581	12	9	Basalt	FB	nil	0.6	8.7	GL	2716
33.	Sangli	Jath	Nigadi Bk	CGWB	47012-1A	498	9.2	6	Basalt	FB	Nil	0.5	11.8	3.5	2250
34.	Sangli	Jath	Pratapur	CGWB	4704-2B	628	5	6.3	Basalt	FB	3	3	8.9	GL	819

S.N	District	Taluka	Village	Agency name	Toposheet no	Altitude (amsl)	Depth (mbgl)	Diameter (m)	Geology	Aquifer	Lining	MP	WL	WL	EC May 17
											(mbgl)	(m agl)	May-17(mbgl)	Nov 2017(mbgl)	(µS/cm)
35.	Sangli	Jath	Rampur	CGWB	4704-3C	651.3	13	8.5	Basalt	WFB	Nil	GL	2.7	2.4	710
36.	Sangli	Jath	Sankh	CGWB	47012-3A	552.9	13	10	Basalt	FB	5	2	12.7	4.7	920
37.	Sangli	Jath	Tikondi	CGWB		520.7	10.2	10	Basalt	FB	4	1	11	6.9	1617
38.	Sangli	Jath	Sonyal	CGWB	4708-1C	581	8	8*8	Basalt	WFB	3	0.5	9.2	5.9	1777
39.	Sangli	Jath	Sordi	CGWB	4708-3B	517	30	0.13	Basalt			0.6	Dry	18.9	1450
40.	Sangli	Jath	Suslad	CGWB	47012-1B	478	8	6	Basalt	FB	1	0.3	20	6.3	4670
41.	Sangli	Jath	Umadi	CGWB	47012-1B	479	12	10	Basalt	FB	5	2	7.1	1.2	815
42.	Sangli	Jath	Utagi	CGWB	47012-1A	514	13	4.5	Basalt	FB	4	0.6	10.72	4.2	978
43.	Sangli	Jath	Yelavi	CGWB	4708-1A	585	11	3	Basalt		10	1.5	12.3	4.2	512
44.	Sangli	Jath	Yeldari	CGWB	47P1-1C	691	8	8	Basalt	WB	8	0.5	10	1.2	2700
45.	Sangli	Khanapur	Alsund	CGWB	47K8-1C	614	10	10	Basalt	FB	4	0.5	Dry	2.1	980
46.	Sangli	Khanapur	Balvadi (kha)	CGWB	47K11-3C	825	11	9	Basalt	WB	7	0.4	8.2	4.1	1516
47.	Sangli	Khanapur	Devikhindi	CGWB	47K11-2B	765	13.2	9	Basalt	FB	4	Nil	12.5	GL	616
48.	Sangli	Khanapur	Gardi	CGWB	47K11-3A	667.2	12	10	Basalt	FB	2	0.4	Dry	4.2	778
49.	Sangli	Khanapur	Kadegaon	CGWB	47K7-3A	686	8.5	8	Basalt	FB	3.7	0.8	4.2	2	916
50.	Sangli	Khanapur	Karanje	CGWB	47K16-1A	744	16	9	Basalt	FB	8	0.5	14.2	8	516
51.	Sangli	Khanapur	Karve	CGWB	47K12-1A	629.8	11	3	Basalt		10	0.9	9.4	1.2	1219
52.	Sangli	Khanapur	Lengare	CGWB	47K11-3B	757	9	9.7	Basalt	FB	6.2	Nil	8.5	3.2	1007
53.	Sangli	Khanapur	Nagewadi	CGWB	47K11-2A	660	13	13*13	Basalt		3.5	0.7	7.25	7.8	1315
54.	Sangli	Khanapur	Nevari	CGWB	47K7-3C	667	12	10	Basalt	FB	3	0.6	7.2	GL	1301
55.	Sangli	Khanapur	Palashi	CGWB	47K16-1A	772	16	12	Basalt	FB		0	12.8	6.7	1800
56.	Sangli	Khanapur	Shalgaon	CGWB	47K7-2A	712	9	8.5	Basalt	FB	8	0.6	8.7	4.1	781
57.	Sangli	Khanapur	Vita	CGWB	47K11-3A	686	7	5	Basalt		4	GL	4.1	1.7	1417
58.	Sangli	Khanapur	Wadiyeraibag	CGWB	47K7-3C	622.2	11	3.2	Basalt		10	1.2	4.4	2.8	1011
59.	Sangli	Khanapur	Yetgaon	CGWB	47K7-2C	653	11	3	Basalt		11	1	10.27	6.2	1417
60.	Sangli	Tasgaon	Anjani	CGWB	47K16-2A	690	10	7*7	Basalt	FB	4	1	7.2	3.1	1670
61.	Sangli	Tasgaon	Dhavali	CGWB	47K12-2A	595.3	17	10	Basalt		10	0.4	6.4	2.1	239
62.	Sangli	Tasgaon	Dhondewadi	CGWB	47K12-1B	788.8	10	8*5	Basalt		5	0.7	9.7	4.3	399
63.	Sangli	Tasgaon	Gavhan	CGWB	47K16-3A	653.8	18	8	Basalt		10	1	5.2	GL	380
64.	Sangli	Tasgaon	Hatnur	CGWB	47K12-2B	620	12	Irregular	Basalt	WB	Nil	GL	9.4	5	1675
65.	Sangli	Tasgaon	Jarandi	CGWB	47K16-1B	784.4	13	Irregular	Basalt	FB	Nil	GL	11.5	5.2	1297
66.	Sangli	Tasgaon	Khujagaon.	CGWB	47K12-2C	641.6	9	3.3	Basalt		9	0.9	Dry	5.2	1319
67.	Sangli	Tasgaon	Manerajuri	CGWB	47K12-3C	603.2	12	12	Basalt	FB	7	0.6	11.5	5.2	982
68.	Sangli	Tasgaon	Nagaon Kavathe	CGWB	47L9-1B	572.6	7.4	4	Basalt	FB	7	0.9	6.2	4.5	977
69.	Sangli	Tasgaon	Savalaj	CGWB	47K16-2A	690	12	8	Basalt	FB	6	1	8.9	4.1	977

S.N	District	Taluka	Village	Agency name	Toposheet no	Altitude (amsl)	Depth (mbgl)	Diameter (m)	Geology	Aquifer	Lining	MP	WL	WL	EC May 17
											(mbgl)	(m agl)	May-17(mbgl)	Nov 2017(mbgl)	(µS/cm)
70.	Sangli	Tasgaon	TASGAON	CGWB	47K12-3A	583	7.7	1	Basalt			GL	4.6	4.2	1340
71.	Sangli	Tasgaon	Visapur	CGWB	47K12-2A	605	15	3.5	Basalt	FB		0.1	2.1	GL	791
72.	Sangli	Tasgaon	Waifale	CGWB	47K16-1A	726.2	7	2.5	Basalt		6	0.9	4.3	2	1615
73.	Sangli	Tasgaon	Wasumbe	CGWB	47K12-3B	583	9	9.5	Basalt	FB	5.5	0.2	5.7	2.9	818
74.	Sangli	Tasgaon	Yogewadi	CGWB	47K12-3C	614	11.2	10	Basalt	FB	7	0.6	10.7	6.3	2250
75.	Sangli	Kavate Mahankal	Banewadi	CGWB	47 L/13-1A	674	9.3	12.35	Basalt	FWB	1.6	0.7	7.5	3.4	725
76.	Sangli	Kavate Mahankal	Dhalgaon	CGWB	47 K/16-2C	675	11.2	Irregular	Basalt	WMB	-	GL	8.4	6.4	524
77.	Sangli	Kavate Mahankal	Dudhebhavi	CGWB	47 O/4-1A	598	12	12	Basalt	FMB	5.9	1	10.6	6.9	2060
78.	Sangli	Kavate Mahankal	Garjewadi	CGWB	47 K/16-2B	779	5.7	10	Basalt	FMB	2.8	0.6	5.6	3.4	462
79.	Sangli	Kavate Mahankal	Ghatnandre	CGWB	47 K/16-2B	772	6.7	4.7	Basalt	WMB	1.3	0.9	4.3	2.4	2348
80.	Sangli	Kavate Mahankal	Kognoli	CGWB	47 L/13-2B	619	8.6	3	Basalt	FMB	8.6	1	4.3	2.7	1830
81.	Sangli	Kavate Mahankal	Kokale	CGWB	47 P/1-1A	587	8.3	8.85	Basalt	FMB	8.3	0.3	5.1	3.6	2200
82.	Sangli	Kavate Mahankal	Moghamvadi	CGWB	47 K/16-3C	627	12	-	Basalt	WB	8.5	GL	8.5	4.2	630
83.	Sangli	Kavate Mahankal	Morgaon	CGWB	47 L/13-1B	638	8	Irregular	Basalt	FMB	-	GL	4.8	1.8	2432
84.	Sangli	Kavate Mahankal	Nagaj	CGWB	47 K/16-3B	663	12.3	11.6	Basalt	FMB	9	GL	11.9	10.4	3122
85.	Sangli	Kavate Mahankal	Nangole	CGWB	47 K/16-3C	636	6.6	2.5	Basalt	FMB	6.6	1	5.4	3.2	605
86.	Sangli	Kavate Mahankal	Shirdon	CGWB	47 K/16-3A	651	17.3	12.7	Basalt	FMB	4.5	0.6	6.6	1.7	780
87.	Sangli	Miraj	Erandoli	CGWB	47 L/13-2A	602	15.9	12 x 12	Basalt	FMB	5.9	0.1	13.1	4.5	3200
88.	Sangli	Miraj	Kavlapur	CGWB	47 L/9-1B	546	10	12	Basalt	WB	-	GL	8.7	2.3	6890
89.	Sangli	Miraj	Khanderajuri	CGWB	47 L/13-2A	633	14	Irregular	Basalt	FMB	-	GL	13.4	1.5	1230
90.	Sangli	Miraj	Khataav	CGWB	47 L/13-3B	570	9.6	3.6	Basalt		4.1	0.9	7.8	2.8	2732
91.	Sangli	Miraj	Malgaon	CGWB	47 L/9-2C	589	14.4	10.90 x 9.80	Basalt		14.4	0.8	4.1	1.3	540
92.	Sangli	Miraj	Mhaisal(s)	CGWB	47 L/9-3C	539	11.8	9.30 x 8.7	Basalt	FMB	8.2	0.5	9.5	4	2320
93.	Sangli	Miraj	Nandre	CGWB	47 L/9-1A	545	18.1	4	Basalt	FMB	7.6	0.5	7.5	6.7	2500
94.	Sangli	Miraj	Salgare	CGWB	47 L/13-2B	608	12.8	8.5	Basalt	FB	6	0.5	12.3	1	716
95.	Sangli	Miraj	Shindewadi	CGWB	47 L/13-1B	632	7.6	3	Basalt	FB	7.6	1	0.5	1.5	1480

Annexure-VII: Chemical analysis of ground water samples, Shallow aquifers

S. No	Location	Latitude	Longitude	pH	EC	TDS	Hardness	Ca	Mg	Na	K	CO3	HCO3	Cl	SO4	NO3	F	Fe	SAR	Na %	RSC
					µS/cm	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l			
1.	Atpadi	17.42	74.94	7.5	600	384	168	41.6	15.6	73.0	0.4	0.7	239.3	84	21.4	1.1	0.9	0.2	2.452	48.7	0.59
2.	Atpadi-1	17.42	74.93	0	3010	1630	895	170.3	114.2	182.0	4.2	0.0	201.3	737.4	20	188	0.15	0.0	2.647	30.96	-14.6
3.	Dhavadvadi	17.31	74.78	7.7	1205	771	264	67.2	23.3	181.0	0.1	6.0	378.2	200	27	16	1	0.1	4.849	59.9	1.126
4.	Dighanchi	17.53	74.93	7.6	1143	732	167	32	21.1	122.0	0.4	6.0	339.2	186	16	2.7	0.9	0.3	4.109	61.45	2.423
5.	Ghanand	17.39	74.77	7.5	1726	1105	468	70.4	71.0	201.0	0.4	2.4	375.8	360	59	0.5	0.8	0.4	4.044	48.35	-3.11
6.	Kargani	17.31	74.88	7.7	850	544	264	35.2	42.8	51.0	3.1	0.0	458.7	80	24	9.3	1.1	0.1	1.366	30.34	2.244
7.	Kharsundi	17.34	74.78	7.1	723	463	256	48	33.0	109.0	1.1	0.4	327.6	116	3.9	1	0.7	0.1	2.965	48.26	0.269
8.	Parekarwadi	17.43	74.75	7.8	1182	756	372	124.8	14.6	116.0	0.9	0.0	327.0	196	11	3.4	0.9	0.2	2.619	40.57	-2.07
9.	Pimpri Kh	17.47	75.01	8.1	1552	993	312	46.4	47.6	228.0	1.1	0.0	224.5	296	136	6.5	0.9	0.2	5.618	61.47	-2.55
10.	Pujarwadi	17.44	74.96	8.1	639	409	192	54.4	13.6	93.0	1.8	2.8	237.1	110	4	9	0.8	0.1	2.922	51.62	0.146
11.	Shetphale	17.32	74.93	7.2	1728	1106	560	118.4	64.2	128.0	1.5	0.0	229.4	376	44	2.3	0.7	0.1	2.354	33.39	-7.43
12.	Umbargaon	17.54	74.96	0	847	450	400	84.17	46.2	59.6	2.61	0.0	219.6	127.6	10	124	0.12	0.0	1.297	24.95	-4.4
13.	Umbergaon	17.55	74.97	7.3	530	339	260	22.4	49.6	40.0	1.4	0.4	215.6	90	28	0.2	0.6	0.6	1.08	25.47	-1.65
14.	Vibhutwadi-1	17.47	74.72	0	741	395	225	42.08	29.2	98.5	1.26	0.0	402.6	67.36	13	53	0.15	0.0	2.858	48.97	2.1
15.	Vithalpur	17.49	74.94	7.3	1077	689	272	51.2	35.0	155.0	1.1	0.0	180.6	176	134	5.6	1.3	0.3	4.091	55.48	-2.47
16.	Ankale	17.05	75.03	8.2	705		154.4	119.5	8.5	74.7	0.8	0.0	151.3	97.7	44	27	0.3	0.0	1.78	32.92	-4.18
17.	Avandhi	17.23	75.2	8.2	2291		622.5	189.2	105.3	141.4	7.7	0.0	100.0	480.6	190	70	0.1	0.0	2.044	25.96	-16.5
18.	Belunki	17.05	75.1	8	741		249	119.5	31.5	52.4	0.8	0.0	239.1	41.1	33	54	0.3	0.0	1.102	21.19	-4.64
19.	Bilur	16.95	75.18	0	1220	647	420	102.2	40.1	88.3	0.36	0.0	268.4	166.6	38	161	0.1	0.0	1.875	31.44	-4
20.	Daribadachi	17.02	75.44	7.8	3631		2012	617.5	338.8	27.1	0.9	0.0	136.6	562.9	860	20	0.4	0.0	0.218	2.007	-56.4
21.	Ekundi	16.93	75.1	8.1	723		119.5	69.7	12.1	81.0	2.4	0.0	251.3	54	39	16	0.3	0.0	2.356	44.49	-0.35
22.	Girgaon	17.09	75.66	8.3	578		169.3	74.7	23.0	59.6	1.6	38.4	161.0	30.8	21	5	0.3	0.0	1.547	31.91	-1.7
23.	Gulvanchi	17.17	75.08	8	845		244	114.5	31.5	74.2	0.7	0.0	205.0	90	66	21	0.2	0.0	1.584	28.1	-4.94
24.	Jath	17.05	75.22	0	1894	1006	745	134.3	99.6	78.0	4.9	0.0	372.1	237.5	42	198	0.17	0.0	1.243	19.11	-8.8
25.	Khairao	17.21	75.35	8.2	1410		328.7	278.9	12.1	194.5	1.1	0.0	239.1	179.9	89	130	0.3	0.0	3.098	36.28	-11
26.	Khalati	17.01	75.13	7.9	577		144.4	109.6	8.5	64.8	1.6	0.0	214.7	33.4	31	8	0.2	0.0	1.605	31.68	-2.65
27.	Kontya Boblad	16.99	75.65	7.9	726		263.9	134.5	31.5	41.7	0.7	0.0	200.1	90	25	25	0.6	0.0	0.841	16.45	-6.02
28.	Kosari	17.15	75.14	8	833		313.7	174.3	33.9	41.8	4.4	0.0	234.2	79.7	60	14	0.3	0.0	0.759	14.39	-7.65

S. No	Location	Latitude	Longitude	pH	EC μS/cm	TDS mg/l	Hardness mg/l	Ca mg/l	Mg mg/l	Na mg/l	K mg/l	CO3 mg/l	HCO3 mg/l	Cl mg/l	SO4 mg/l	NO3 mg/l	F mg/l	Fe mg/l	SAR	Na %	RSC
29.	Kumbhari	17.11	75.12	0	771	408	380	86.17	40.1	56.9	1.4	0.0	317.2	109.9	24	114	0.14	0.0	1.269	24.83	-2.4
30.	Madgyal	17.14	75.42	8	1489		378.5	293.8	20.6	265.0	1.1	0.0	600.2	195.3	96	3	0.5	0.0	4.031	41.4	-6.52
31.	Maithal	17.14	75.36	8	411		114.5	59.8	13.3	39.0	0.6	0.0	141.5	30.8	21	70	0.3	0.0	1.188	29.57	-1.76
32.	Navalwadi	17.23	75.09	8.1	974		328.7	109.6	53.2	73.5	2.6	0.0	385.5	82.2	11	9	0.3	0.0	1.441	24.9	-3.53
33.	Nigadi Bk	17.23	75.54	7.6	1876		478.1	164.3	76.2	95.9	1.7	0.0	34.2	326.4	280	10	3.1	0.0	1.551	22.56	-13.9
34.	Rampur	17.04	75.18	8.1	616		184.3	104.6	19.4	61.4	0.6	0.0	248.9	36	30	2	0.4	0.0	1.447	28.27	-2.74
35.	Shegaon	17.16	75.18	0	2421	1285	910	180.4	111.8	82.2	5.9	0.0	500.2	453.8	10	149	0.14	0.0	1.185	17	-10
36.	Sordi	17.05	75.4	7.8	1104		283.9	174.3	26.6	85.9	0.8	0.0	156.2	97.7	130	30	0.3	0.0	1.602	25.66	-8.33
37.	Suslad	17.22	75.63	7.8	5692		1942	826.7	271.1	350.1	1.8	0.0	#####	377.8	820	30	0.2	0.0	2.702	19.38	-42.4
38.	Umadi	17.24	75.6	7.7	966		179.3	94.6	20.6	102.1	2.9	0.0	75.6	146.5	144	8	0.3	0.0	2.48	41.31	-5.18
39.	Valsang	17.06	75.32	0	1961	1042	630	192.4	36.5	111.9	6.8	0.0	457.5	212.7	11	164	0.12	0.0	1.94	28.58	-5.1
40.	Yelavi	17.2	75.31	8.1	573		109.6	84.7	6.1	64.5	1.5	0.0	136.6	77.1	37	30	0.4	0.0	1.825	37.56	-2.49
41.	Bagewadi	17.07	75.11	7.8	1200	768	184	56	10.7	233.0	5.2	0.0	268.4	180	64	20.1	0.9	0.7	7.478	73.65	0.725
42.	Bevnoor	17.2	75.05	7.9	1000	640	288	85.6	18.0	99.0	4.2	0.0	390.4	120	80	0.9	0.6	0.2	2.54	43.42	0.648
43.	Biur	16.97	74.1	8.1	789	505	52	20.8	0.0	164.0	1.4	0.0	190.3	116	5	53	0.3	0.1	9.903	87.35	2.081
44.	Daflapur	17	75.08	7.2	784	502	192	64	7.8	106.0	2	0.0	278.2	92	54.1	0.2	0.7	0.5	3.331	54.88	0.726
45.	Dhavdwadi	17.12	75.07	7.7	1105	707	252	84.8	9.7	108.0	1	0.0	317.2	182	48	5.6	1	0.1	2.962	48.42	0.168
46.	Jadarboblad	17.23	75.44	7.8	667	427	216	68.8	10.7	57.3	0.7	1.1	178.9	88	28	0.9	1.3	0.2	1.697	36.79	-1.35
47.	Karanjgi	17.11	75.3	7.5	2090	1338	600	233.6	3.9	132.5	4.5	0.0	273.3	376	165	7	1	0.1	2.355	32.92	-7.5
48.	Khojanwadi	16.95	75.25	7.6	3190	2042	764	233.6	43.7	260.0	2.5	0.0	390.4	384	281	7.9	1.2	0.2	4.095	42.71	-8.86
49.	Lavangi	17.06	75.64	7.7	1020	653	300	65.6	33.0	108.0	2.2	0.0	244.0	136	84	5.4	0.6	0.1	2.714	44.24	-1.99
50.	Morbagi	17.09	75.61	7.7	1177	753	368	123.2	14.6	116.7	2.9	0.0	195.2	200	220	27.1	0.7	0.2	2.649	41.21	-4.15
51.	Muchandi	16.98	75.34	7.4	1636	1047	428	134.4	22.4	204.0	1.5	0.0	380.6	248	241	11.1	1.2	0.3	4.293	51.05	-2.31
52.	Nigdi Kh	17.12	75.27	7.4	1160	742	460	147.2	22.4	117.5	2.6	0.0	219.6	262	86	7.7	0.5	0.2	2.385	36.05	-5.59
53.	Sankh	17.05	75.5	7.6	2460	1574	640	192	38.9	240.0	7.8	0.0	244.0	420	260	3.6	1.2	0.1	4.13	45.43	-8.78
54.	Shirala	16.98	74.13	8.7	251	161	136	32	13.6	45.0	2.8	6.8	144.9	64	1.1	4	1.1	0.3	1.68	42.76	-0.11
55.	Tippehalli	17.09	75.18	7.7	694	444	236	67.2	16.5	62.5	0.3	1.0	203.0	122	45	6.1	0.8	0.2	1.771	36.65	-1.35
56.	Waifal	17.16	75.26	7.4	526	337	232	56	22.4	33.0	0.7	0.4	167.6	70	16.1	9.9	0.6	0.1	0.943	23.88	-1.87
57.	Alkud M	16.98	74.76	7.4	970	621	484	128	39.9	25.5	0.2	0.0	419.7	142	46	5.4	0.5	0.2	0.505	10.34	-2.79

S. No	Location	Latitude	Longitude	pH	EC	TDS	Hardness	Ca	Mg	Na	K	CO3	HCO3	Cl	SO4	NO3	F	Fe	SAR	Na %	RSC
					µS/cm	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l			
58.	Chorochoi	17.14	75.02	7.2	651	417	204	56	15.6	55.5	0.9	0.4	247.6	82	26.2	6.3	0.3	0.7	1.692	37.43	-0
59.	Deshing	16.97	74.8	7.2	1125	720	356	84.8	35.0	87.0	1.4	0.0	375.8	166	48	5	0.4	0.3	2.007	34.95	-0.95
60.	Dudhebhavi	17.17	75.03	7.2	792	507	228	80	6.8	90.5	0.1	0.0	322.1	126	1	0.5	1	0.6	2.61	46.39	0.727
61.	Hingangaon	16.98	74.86	7.1	4850	3104	1612	536	66.1	469.0	14	0.0	#####	760	900	40	1.1	0.9	5.086	39.21	-15.5
62.	Kerewadi	17.12	74.93	7.4	463	296	188	52.8	13.6	44.0	0.2	0.5	199.5	64	22	0.5	1	0.3	1.397	33.83	-0.47
63.	Kokale	16.99	75.03	7.2	4250	2720	1580	334.4	180.8	360.0	0.9	0.0	331.8	800	1450	0.5	1	0.2	3.942	33.2	-26.1
64.	Kuchi	17.06	74.87	7.5	1518	972	540	104	68.0	134.0	1.9	0.0	370.9	280	200	9.9	1.1	0.0	2.51	35.27	-4.71
65.	Kundalpur	17.12	74.97	7.6	806	516	340	88	29.2	53.0	2	0.0	541.7	50	2	9.9	0.7	0.0	1.251	25.77	2.088
66.	Nagaj	17.14	74.94	8.1	1935	1238	460	96	53.5	231.0	3.2	0.0	522.2	278	134	19	1.2	0.2	4.688	52.44	-0.63
67.	Nimaj	17.16	74.98	8.2	1345	861	364	104	25.3	157.0	3.1	0.0	439.2	216	10	7.9	0.8	0.0	3.582	48.73	-0.07
68.	Tisangi	17.16	74.86	7.7	1070	685	388	54.4	61.2	67.3	2.3	0.0	380.6	110	52	11.1	0.1	0.6	1.487	27.81	-1.51
69.	Banewadi	16.95	74.8	8	580		204.2	159.4	10.9	39.0	0.81	0.0	175.7	53.97	59	21	0.39	0.0	0.807	16.25	-5.97
70.	Dhalgaon	17.11	74.98	8	632		204.2	144.4	14.5	64.0	1.98	0.0	244.0	33.41	47	7	0.77	0.0	1.358	25.23	-4.4
71.	Dudhebhavi	17.17	75.02	7.9	1807		443.2	199.2	59.3	210.0	3.09	0.0	258.6	331.5	223	7	0.39	0.0	3.356	38.34	-10.6
72.	Garjewadi	17.13	74.87	8.1	623		249	144.4	25.4	30.0	4.11	0.0	214.7	48.83	63	7	0.554	0.0	0.605	13.17	-5.78
73.	Ghatnandre	17.18	74.87	7.9	1948		547.8	268.9	67.8	145.0	73.8	0.0	488.0	313.6	128	8	0.247	0.0	2.047	30.14	-11
74.	Kognoli	16.91	74.91	8.2	1574		259	194.2	15.7	230.0	26	0.0	439.2	154.2	190	9	1.06	0.0	4.269	49.27	-3.79
75.	Kokale	16.99	75.03	7.9	5274		1818	622.5	290.4	370.0	1.86	0.0	248.9	1229	647	11	0.292	0.0	3.07	22.71	-50.9
76.	Moghamvadi	17.03	74.99	7.8	811		268.9	234.1	8.5	68.0	0.63	0.0	200.1	84.81	104	25	0.501	0.0	1.189	19.37	-9.1
77.	Morgaon	16.99	74.83	8.2	1790		582.7	263.9	77.4	92.0	59.7	0.0	297.7	421.5	44	7	0.135	0.0	1.28	22.05	-14.7
78.	Nagaj	17.15	74.94	7.8	2515		791.8	338.6	110.1	210.0	6.22	0.0	366.0	354.7	409	44	0.438	0.0	2.536	26.37	-20
79.	Nangole	17.03	74.92	7.8	780		209.2	184.3	6.1	77.0	1.33	0.0	273.3	74.53	66	7	0.456	0.0	1.522	25.88	-5.21
80.	Sarati	16.92	74.9	0	1729	915	625	114.2	82.6	110.0	0.83	0.0	311.1	336.8	37	162	0.19	0.0	1.914	27.78	-7.4
81.	Shirdon	17.02	74.81	7.8	1502		418.3	273.9	35.1	154.0	0.87	0.0	253.8	228.7	214	9	0.273	0.0	2.328	28.88	-12.4
82.	Alkud	17.02	74.78	0	943	502	525	130.3	48.6	36.4	2.86	0.0	402.6	124.1	49	97	0.14	0.0	0.691	13.62	-3.9
83.	Kawathe Mahankal	17.01	74.87	0	1600	848	505	122.2	48.6	86.0	12.3	15.0	439.2	205.6	40	48	0.19	0.0	1.665	28.65	-2.4
84.	Kuchi	17.06	74.86	0	636	336	285	60.12	32.8	69.2	1.17	0.0	359.9	77.99	10	58	0.09	0.0	1.783	34.78	0.2
85.	Nimaj-1	16.83	74.64	0	990	522	405	70.14	55.9	62.0	2.01	0.0	420.9	145.3	10	41	0.23	0.0	1.34	25.34	-1.2
86.	Alsund	17.21	74.48	8.2	845		254	29.9	54.5	70.7	4.8	0.0	219.6	90	64	8	0.3	0.0	1.779	34.86	-2.38

S. No	Location	Latitude	Longitude	pH	EC	TDS	Hardness	Ca	Mg	Na	K	CO3	HCO3	Cl	SO4	NO3	F	Fe	SAR	Na %	RSC
					µS/cm	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l			
87.	Balvadi (kha)	17.3	74.72	8	1714		313.7	104.6	50.8	156.6	5	0.0	151.3	287.9	220	30	0.4	0.0	3.142	42.48	-6.92
88.	Belavade	17.37	74.37	0	617	327	230	52.1	24.3	57.7	1.04	0.0	201.3	95.72	35	63	0.12	0.0	1.656	35.56	-1.3
89.	Bhaurachi Wadi	17.41	74.62	8.4	343	220	140	35.2	12.6	32.0	0.3	4.0	167.9	36	8	15	0.5	0.7	1.177	33.36	0.088
90.	Bhood	17.34	74.69	8.3	413	264	60	12.8	6.8	98.0	0.2	3.3	176.6	100	25	5	0.2	0.6	5.507	78.08	1.806
91.	Devikhindi	17.39	74.63	8.1	555		174.3	79.7	23.0	45.7	0.4	0.0	234.2	20.6	14	12	0.4	0.0	1.16	25.4	-2.03
92.	Ghanwad_Anandpur	17.33	74.53	0	845	447	365	94.19	31.6	60.0	1.11	0.0	256.2	109.9	23	70	0.12	0.0	1.366	26.54	-3.1
93.	Ghoti Kh	17.25	74.65	8.3	486	311	180	52.8	11.7	45.0	0.1	3.3	176.6	92	37	12	0.5	0.5	1.46	35.29	-0.59
94.	Kadegaon	17.29	74.3	7.9	1657		333.7	139.4	47.2	138.2	1.2	0.0	244.0	239	90	60	0.5	0.0	2.582	35.79	-6.84
95.	Kadepur	17.3	74.37	0	1302	691	510	86.17	71.7	65.0	10.9	0.0	384.3	131.2	59	178	0.09	0.0	1.252	23.35	-3.9
96.	Khambale A	17.29	74.28	7.9	333	213	160	28.8	21.4	29.0	1.9	1.0	138.9	68	17	5	0.5	0.2	0.998	29.07	-0.88
97.	Khanapur	17.26	74.72	8	615	395	180	28.8	26.2	53.4	0.7	1.1	118.8	156	40	1	0.3	0.0	1.732	39.43	-1.61
98.	Kumbhargaon	17.14	74.41	7.5	379	243	152	30.4	18.5	45.5	0.2	0.5	171.5	66	20	2	0.3	0.6	1.606	39.53	-0.21
99.	Nagewadi	17.35	74.52	8.4	1554	995	268	60.8	28.2	205.0	0.8	0.0	87.8	330	129	8	0.2	0.5	5.451	62.54	-3.91
100	Nevari	17.32	74.48	7.9	1258		418.3	283.9	32.7	30.5	0.4	0.0	146.4	205.6	140	30	0.1	0.0	0.457	7.349	-14.5
101	Ped	17.2	74.67	0	591	314	295	70.14	29.2	41.4	0.68	0.0	329.4	53.18	14	60	0.17	0.0	1.048	23.55	-0.5
102	Salshinge	17.35	74.57	8.5	417	267	160	24	24.3	55.0	0.2	4.2	139.7	66	23	15	0.1	0.2	1.892	42.86	-0.77
103	Shalgaon	17.38	74.31	8	645		244	134.5	26.6	33.6	4.7	0.0	219.6	46.3	18	32	0.2	0.0	0.693	15.09	-5.3
104	Sonsal	17.22	74.29	7.4	151	97	176	33.6	22.4	31.0	0.7	0.3	147.6	60	11	1	0.6	0.3	1.017	27.99	-1.08
105	Wangi	17.23	74.4	7.9	399	255	152	33.6	16.5	56.0	1	1.0	135.0	76	34	2	0.5	0.2	1.977	44.78	-0.79
106	Yetgaon	17.37	74.45	7.9	1519		498	263.9	56.9	74.7	1.5	0.0	151.3	272.4	145.6	10	0.2	0.0	1.088	15.55	-15.4
107	Arag	16.79	74.81	8	816	522	320	62.4	39.9	38.0	0.5	0.0	229.4	110	51.2	23.9	0.2	0.2	0.925	20.67	-2.63
108	Arag	16.79	74.82	0	757	401	280	70.14	25.5	82.0	3.4	0.0	335.5	85.08	13	97	0.19	0.0	2.133	39.5	-0.1
109	Bedag	16.8	74.74	0	746	396	355	96.19	27.9	48.4	0.85	0.0	317.2	102.8	13	63	0.21	0.0	1.116	23.04	-1.9
110	Bhose	16.96	74.74	0	585	310	275	60.12	30.4	53.1	0.95	0.0	341.6	53.18	11	65	0.09	0.0	1.392	29.79	0.1
111	Dhavli	16.75	74.65	7.8	4890	3130	1400	256	184.7	268.9	2	0.0	278.2	854	321	13.1	0.8	0.5	3.128	29.58	-23.4
112	Erandoli	16.85	74.77	7.9	2885		991	473.1	125.9	212.0	1.56	0.0	244.0	629.7	284	42	0.4	0.0	2.238	21.43	-30
113	Kalambi	16.9	74.69	7.7	372	238	152	28.8	19.4	50.0	0.4	0.6	119.4	62	44	0.9	0.3	0.3	1.765	41.85	-1.06
114	Karnal-1	16.92	74.57	0	1965	1042	705	134.3	89.9	98.0	0.89	0.0	610.0	237.5	53	113.4	0.1	0.0	1.606	23.31	-4.1
115	Kavalapur	16.92	74.61	7.7	1900	1216	576	152.8	47.1	100.0	6.5	0.0	185.4	320	99.9	52	0.4	0.2	1.814	28.19	-8.46

S. No	Location	Latitude	Longitude	pH	EC	TDS	Hardness	Ca	Mg	Na	K	CO3	HCO3	Cl	SO4	NO3	F	Fe	SAR	Na %	RSC
					µS/cm	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l			
116	Kavlapur	16.93	74.61	7.7	7500		2500	1569	226.3	535.0	71	0.0	409.9	1979	579	44	0.13	0.0	3.344	20.57	-90.2
117	Kavthepiran	16.88	74.47	7.4	164	105	100	16	14.6	22.1	2	0.2	99.8	36	16	0.9	0.6	0.3	0.962	33.63	-0.35
118	Khanderajuri	16.9	74.79	7.8	1004		254	254	0.0	113.0	1.19	0.0	292.8	110.5	101	12	0.471	0.0	1.953	28.07	-7.87
119	KhataV	16.8	74.89	7.8	2528		766.9	224.1	131.9	230.9	1.46	0.0	322.1	467.8	314	42	0.811	0.0	3.026	31.39	-16.8
120	Malgaon	16.87	74.71	8.1	860		278.9	189.2	21.8	69.2	0.41	0.0	195.2	115.7	118	7	0.228	0.0	1.27	21.19	-8.04
121	Mhaisal	16.78	74.7	7.3	6270	4012	792	296	12.6	300.0	4.8	0.0	253.8	360	400	14.9	0.1	0.1	4.642	45.45	-11.7
122	Mhaisal(s)	16.75	74.7	7.6	1854		537.8	398.4	33.9	181.5	0.19	0.0	234.2	344.4	224	34	0.256	0.0	2.345	25.84	-18.8
123	Miraj-1	16.81	74.64	0	1251	663	375	60.12	54.7	120.0	0.89	0.0	366.0	159.5	22	108	0.21	0.0	2.696	41.15	-1.5
124	Nandre	16.95	74.54	7.4	1310	838	436	88	52.5	53.6	5.2	0.0	146.4	202	120	9	0.3	0.1	1.117	22.06	-6.31
125	Nandre	16.96	74.54	7.8	2008		328.7	179.3	36.3	309.0	0.49	0.0	380.6	267.3	289	28	0.158	0.0	5.503	53	-5.69
126	Palus	16.99	74.47	7.2	1640	1050	120	40	4.9	110.7	2.4	0.0	219.6	60	167	8	0.6	0.2	4.4	67.06	1.203
127	Salgare	16.89	74.91	7.8	1189		363.5	169.3	47.2	104.0	0.16	0.0	273.3	141.4	129	36	0.397	0.0	1.822	26.86	-7.85
128	Samdoli	16.87	74.5	7.5	1254	803	364	72.8	44.2	123.4	4.5	0.0	327.0	150	107	7.9	0.2	0.9	2.815	42.99	-1.91
129	Sangli_city	16.87	74.58	0	1506	797	590	82.16	93.6	80.0	2.95	0.0	463.6	205.6	11	164	0.21	0.0	1.433	23.16	-4.2
130	Sangli_Inamdhamni	16.84	74.59	0	2448	1300	925	174.3	119.1	99.0	1.69	0.0	311.1	351	32	286	0.14	0.0	1.416	19.04	-13.4
131	Sangli_Sangalwadi	16.88	74.55	0	1376	734	525	62.12	89.9	80.0	0.65	21.0	445.3	131.2	32	140	0.14	0.0	1.519	24.99	-2.5
132	Sawalwadi	16.86	74.43	7.9	1264	809	416	120	28.2	105.0	1.5	0.0	146.4	166	160	13.1	0.4	0.2	2.241	35.67	-5.91
133	Shindewadi	16.97	74.84	7.7	1786		677.3	423.3	61.7	88.1	0.15	0.0	209.8	241.6	344	36	0.144	0.0	1.058	12.77	-22.8
134	Tung	16.93	74.48	7.7	1183	757	380	83.2	41.8	106.0	0.1	0.0	170.8	206	116	12	0.5	0.1	2.367	37.81	-4.79
135	Tung	16.92	74.49	0	1736	924	670	122.2	88.7	64.0	3.65	0.0	353.8	226.9	44	113	1.53	0.0	1.076	17.68	-7.6
136	Wangi-1	17.24	74.39	0	557	297	270	74.15	20.7	34.4	0.52	0.0	237.9	74.45	12	51	0.1	0.0	0.909	21.83	-1.5
137	Bilashi	17	74.01	8	771	493	340	86.4	30.1	42.0	1.1	1.2	126.8	112	91	35	0.4	0.2	0.992	21.46	-4.67
138	Chikhali	16.93	74.09	8.2	178	114	60	22.4	1.0	20.0	0.2	0.9	59.0	46	2	0.4	0.2	0.7	1.124	42.22	-0.2
139	Chikhawadi	16.94	74.14	7.3	130	83	136	22.4	19.4	6.8	1.1	0.2	119.8	36	2	0.4	0.5	1.9	0.254	10.65	-0.75
140	Mandur	17.13	73.88	7.7	188	120	80	12.8	11.7	14.0	9.5	0.4	91.5	30	5	2	0.6	0.3	0.681	34.77	-0.08
141	Mangle	16.91	74.13	7.8	560	358	172	40	17.5	34.6	1	0.9	151.1	90	40	31	0.2	0.1	1.148	30.82	-0.93
142	Sawantwadi	17.1	74	8.1	531	340	172	32	22.4	47.5	0.4	1.6	138.3	124	38	31	0.6	0.2	1.576	37.67	-1.11
143	Shirala	16.98	74.12	0	931	494	365	100.2	27.9	83.5	2.4	0.0	335.5	190	10	51	0.12	0.0	1.9	33.59	-1.8
144	Sirshi	17.06	74.07	8.3	130	83	136	24	18.5	22.1	0.4	2.8	149.1	84	2	0.1	1.1	0.5	0.825	26.34	-0.18

S. No	Location	Latitude	Longitude	pH	EC μS/cm	TDS mg/l	Hardness mg/l	Ca mg/l	Mg mg/l	Na mg/l	K mg/l	CO3 mg/l	HCO3 mg/l	Cl mg/l	SO4 mg/l	NO3 mg/l	F mg/l	Fe mg/l	SAR	Na %	RSC
145	Bambwade	17.09	74.5	0	835	442	375	116.2	20.7	65.5	1.86	0.0	396.5	95.72	43	59	0.12	0.0	1.471	27.86	-1
146	Burli	17.04	74.43	7.6	138	88	140	32	14.6	19.4	1.1	0.4	111.6	76	12	2	0.5	0.1	0.714	23.77	-0.95
147	Dhondewadi	17.2	74.64	8.3	478		224.1	124.5	24.2	19.4	0.8	38.4	131.8	28.3	8	3	0.3	0.0	0.417	9.532	-4.76
148	Gohan	17.05	74.77	8.4	897	574	196	51.2	16.5	188.4	0.2	4.8	219.6	162	125	11	0.2	0.1	5.858	67.69	-0.16
149	Jarandi	17.18	74.83	8.3	605		119.5	74.7	10.9	77.3	1.2	43.2	112.2	51.4	29	7	0.4	0.0	2.211	42.32	-1.35
150	Khujagaon.	17.11	74.72	8	927		318.7	169.3	36.3	50.5	4.1	0.0	268.4	92.5	61	25	0.2	0.0	0.919	16.76	-7.04
151	Kundal	17.12	74.41	8	891	570	328	108.8	13.6	61.1	0.5	0.0	146.4	132	90	11	0.3	0.4	1.469	28.97	-4.15
152	Nagaon Kavathe	16.98	74.63	8	1772		483.1	174.3	75.0	110.8	2.6	0.0	261.1	239	230	40	0.2	0.0	1.768	24.74	-10.6
153	Panmalewadi	17.13	74.47	0	646	342	380	82.16	42.5	49.3	2.36	0.0	231.8	184.3	33	57	0.09	0.0	1.1	22.49	-3.8
154	Takari	17.13	74.36	0	833	441	325	68.14	37.7	94.6	1.91	0.0	378.2	77.99	18	88	0.26	0.0	2.283	39.05	-0.3
155	TASGAON	17.04	74.56	8.5	1591		338.6	99.6	58.1	219.6	8.8	72.0	536.8	141.4	30	84	0.3	0.0	4.327	50.07	1.446
156	Turchi	17.12	74.41	8.5	279	179	120	24	14.6	30.7	0.1	4.0	135.8	60	10	1.8	0.3	0.2	1.22	35.82	-0.04
157	Visapur	17.13	74.56	8.1	1153		313.7	179.3	32.7	85.2	9.4	0.0	322.1	123.4	96	14	0.2	0.0	1.536	25.33	-6.36
158	Visapur	17.12	74.59	0	710	378	320	102.2	15.8	59.1	3.3	0.0	396.5	46.09	12	43	0.09	0.0	1.436	29.31	0.099
159	Waifale	17.18	74.78	8.1	2041		363.5	84.7	67.8	120.4	110.8	0.0	514.8	226.2	80	20	0.2	0.0	2.366	45.15	-1.37
160	Yevali	17.07	74.52	0	3461	1842	1215	264.5	134.9	58.9	5.3	0.0	231.8	620.4	44	166	0.11	0.0	0.735	9.994	-20.5
161	Ashta	16.95	74.4	8.3	753	482	276	88	13.6	45.8	1.5	3.2	171.7	100	15	6.7	0.4	0.1	1.2	26.93	-2.59
162	Ashta	16.95	74.41	0	1894	505	745	146.3	92.4	55.9	0.75	0.0	256.2	180.8	53	283	0.1	0.0	0.891	14.12	-10.7
163	Bavchi	16.96	74.37	7.5	330	211	132	32	12.6	41.3	0.5	0.4	139.6	66	18	0.8	0.5	0.1	1.565	40.7	-0.33
164	Hubalwadi	17.1	74.29	8.4	640	410	260	38	40.1	57.5	0.2	4.1	171.8	120	82	5.4	0.8	0.2	1.552	32.55	-2.24
165	Itkare	16.96	74.27	7.8	224	143	112	16	17.5	20.6	0.2	0.7	111.3	48	4	5.2	0.3	0.1	0.847	28.71	-0.39
166	Navekhed	17.06	74.35	7.5	870	557	344	116.8	12.6	42.2	0.5	0.0	112.2	212	126	3.9	0.2	0.1	0.991	21.21	-5.03
167	Nerle	17.09	74.23	7.9	484	310	200	32	29.2	27.3	1.1	1.2	158.8	54	22	4.6	0.3	0.2	0.84	23.33	-1.35
168	Peth	17.05	74.23	0	1116	594	405	92.18	42.5	90.9	5.59	0.0	347.7	159.5	39	130	0.09	0.0	1.965	33.59	-2.4
169	Rethared	17.03	74.2	8	290	186	52	16	2.9	54.6	0.6	0.7	71.3	76	12	2.8	0.1	0.1	3.296	69.72	0.152
170	Sakharale	17.07	74.28	8.1	945	605	380	76.8	45.7	41.4	0.9	0.0	112.2	206	129	5.1	0.2	0.8	0.924	19.37	-5.75
171	Shene	17.11	74.19	0	997	578	355	62.12	48.6	84.0	0.61	0.0	402.6	99.26	41	62	0.26	0.0	1.94	34.08	-0.5
172	Shivapuri	17	74.24	7.2	230	147	116	24	13.6	21.1	0.3	0.2	123.8	54	14	5.5	0.3	0.3	0.853	28.54	-0.28
173	Tandulwadi	16.92	74.29	7.3	410	262	136	32	13.6	36.3	0.1	0.2	123.8	56	37	3.8	0.4	0.1	1.355	36.8	-0.68

S. No	Location	Latitude	Longitude	pH	EC	TDS	Hardness	Ca	Mg	Na	K	CO3	HCO3	Cl	SO4	NO3	F	Fe	SAR	Na %	RSC
					µS/cm	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l			
174	Tujarpur	17.01	74.29	7.7	293	188	132	35.2	10.7	24.2	0.2	0.4	91.5	52	10	0.4	0.35	0.2	0.917	28.64	-1.12

Annexure VIII: Chemical analysis of ground water samples, deeper aquifers

S No	Location	Type	Latitude	Longitude	pH	EC	TDS	Hardness	Ca	Mg	Na	K	CO3	HCO3	Cl	SO4	NO3	F	Fe	SAR	Na %	RSC
						µS/cm	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l			
1.	Diganchi	Borewell	17.536	74.909	8.1	350	NA	NA	NA	NA	NA	NA	NA	NA	50	NA	NA	NA	0.0	NA	NA	NA
2.	Diganchi	Borewell	17.533	74.918	8	900	NA	NA	NA	NA	NA	NA	NA	NA	131	NA	NA	NA	0.0	NA	NA	NA
3.	Vibhutewadi	Borewell	17.46	74.713	8.4	400	NA	NA	NA	NA	NA	NA	NA	NA	60	NA	NA	NA	0.0	NA	NA	NA
4.	Achaknalli	Borewell	17.083	74.233	7.9	2050	970	340	32	63.0	313.0	0.2	0.0	409.0	266	293	NA	NA	0.0	7.3954	66.843	-0.076
5.	Nimbavade	Borewell	17.457	74.845	8	510	260	135	30	15.0	54.0	0.5	0.0	140.0	71	17	2	2.7	0.0	2.0102	46.376	-0.436
6.	Gardi-ghanwad	Borewell	17.315	74.54	7.4	820	468	135	42	7.0	112.0	0.5	0.0	73.0	188	79	2	0.71	0.0	4.2154	64.644	-1.475
7.	Kundal	Borewell	17.122	74.421	7.6	570	315	230	50	25.0	21.0	0.4	0.0	238.0	25	42	31	0.24	0.0	0.6055	16.871	-0.651
8.	Umadi	Borewell	17.263	75.6	8	1420	874	295	46	44.0	186.0	4.8	0.0	268.0	89	296	73	0.98	0.0	4.7048	58.136	-1.522
9.	Umadi	Borewell	17.263	75.6	7.4	1750	1104	250	94	4.0	281.0	0.9	0.0	49.0	309	384	1.3	5.4	0.0	7.7157	70.928	-4.217
10.	Madgyal	Borewell	17.135	75.417	7.7	2300	1340	520	184	15.0	279.0	0.3	0.0	92.0	638	140	35	0.64	0.0	5.3182	53.972	-8.908
11.	Karajgi	Borewell	17.121	75.575	8	3350	2042	825	146	112.0	377.0	0.6	0.0	342.0	450	654	128	0.68	0.0	5.7098	49.989	-10.89
12.	Bilashi	Borewell	16.994	74.024	8.1	430	218	190	36	24.0	8.0	0.8	0.0	220.0	21	6	11	0.32	0.0	0.2534	8.9018	-0.165
13.	Muchanai	Borewell	16.982	75.333	8.1	950	516	150	22	23.0	147.0	0.2	0.0	390.0	89	18	20	1.01	0.0	5.23	68.313	3.4023
14.	Tanaulwadi	Borewell	16.923	74.29	8.3	730	396	205	46	22.0	66.0	1.8	18.0	195.0	121	6	17	0.54	0.0	2.0039	41.54	-0.31
15.	Arag	Borewell	16.795	74.809	8.1	380	216	35	8	4.0	66.0	3	0.0	110.0	67	2	8	2.91	0.0	4.7579	80.189	1.0747
16.	Kasegaon	Borewell	17.132	74.188	8.2	870	482	360	76	41.0	24.0	3.6	0.0	268.0	106	12	86	0.29	0.0	0.5516	13.686	-2.773
17.	Kasegaon	Borewell	17.128	74.19	8.2	840	445	250	62	23.0	74.0	0.5	0.0	281.0	124	12	8	0.54	0.0	2.0388	39.328	-0.38
18.	Gatarwadi	Borewell	16.998	74.318	7.9	3450	2014	365	40	64.0	591.0	0.8	0.0	403.0	730	346	32	0.89	0.0	13.493	78.113	-0.655
19.	Mirajewadi	Borewell	16.947	74.431	7.7	2080	1252	915	250	70.0	48.0	9	0.0	134.0	376	258	174	0.49	0.0	0.6915	11.28	-16.04
20.	Shigaon	Borewell	16.876	74.359	8.2	790	450	165	40	16.0	98.0	7	0.0	183.0	156	6	35	0.52	0.0	3.3126	57.285	-0.313
21.	Hivthad	Borewell	17.262	74.847	7.6	1073	687	300	112	4.9	116.0	1.4	0.0	366.0	204	34	1	0.9	0.2	2.9153	45.891	0.0069
22.	Nidhal	Borewell	17.461	74.839	8	660	455	50	10	6.0	129.0	0.2	0.0	61.0	138	90	52	0	0.0	7.9655	85.086	0.0072
23.	Rampur	Borewell	17.421	74.94	7.6	616	394	120	35.2	7.8	98.0	1	0.9	231.1	96	4	2.5	0.9	0.2	3.8931	64.136	1.4196

S No	Location	Type	Latitude	Longitude	pH	EC	TDS	hardness	Ca	Mg	Na	K	CO3	HCO3	Cl	SO4	NO3	F	Fe	SAR	Na %	RSC
						µS/cm	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l			
24.	Zare	Borewell	17.46	74.755	7.8	1216	778	280	19.2	56.4	106.0	1.2	0.0	263.5	146	60	10.6	0.8	0.1	2.7562	45.332	-1.279
25.	Vibhutewadi	Borewell	17.467	74.717	8.4	400	400	0	0	0.0	0.0	0	0.0	60.3	0	0	0	0	0.0	NA	NA	0.988
26.	Borgi Bk	Borewell	17.136	75.589	7.7	485	310	160	51.2	7.8	57.0	2.4	0.7	151.3	50	54.1	7.4	1	0.6	1.9613	44.286	-0.693
27.	Deonal	Borewell	17.003	75.246	7.8	970	621	352	120	12.6	84.1	0.8	0.0	302.6	116	110	6.1	1.3	0.2	1.9521	34.371	-2.065
28.	Deonal	Borewell	17.003	75.246	7.8	1340	858	320	112	9.7	115.0	1.1	0.0	278.2	206	148	5.4	0.9	0.2	2.7994	44.061	-1.827
29.	Karajgi	Borewell	17.121	75.575	8	3350	2042	NA	825	146.0	112.0	377	3.6	Nil	342	450	654	0.68	128.0	0.9448	21.439	NA
30.	Madgyal	Borewell	17.135	75.417	7.7	2300	1340	NA	520	184.0	15.0	279	3.0	Nil	92	638	140	0.64	35.0	0.144	15.933	NA
31.	Muchandi	Borewell	16.982	75.333	8.1	950	516	NA	150	22.0	23.0	147	2.0	Nil	390	89	18	1.01	20.0	0.4641	33.864	NA
32.	Shinganapur	Borewell	16.941	75.031	8.4	1141	730	140	35.2	12.6	189.0	1.8	0.0	83.0	282	185	1.6	0.9	0.2	6.9572	74.748	-1.433
33.	Umadi	Borewell	17.263	75.6	7.4	1750	1104	NA	250	94.0	4.0	281	0.9	Nil	49	309	384	5.4	1.3	0.0547	26.696	NA
34.	Utgi	Borewell	17.196	75.504	7.8	1969	1260	896	182.4	106.9	165.0	0.9	0.0	185.4	448	706	5.6	0.6	0.2	2.3995	28.692	-14.86
35.	Vhaspet	Borewell	17.113	75.399	7.3	854	547	125	36.8	8.0	136.0	0.8	0.0	268.4	126	56.4	16.9	0.9	0.6	5.2974	70.413	1.9047
36.	Kavathe Mahankal	Borewell	17.007	74.867	7.1	833	533	352	96	27.2	43.0	0.3	0.0	341.6	108	51.3	6.3	0.8	0.2	0.9978	21.089	-1.429
37.	Ranjani	Borewell	16.971	74.948	7.7	820	525	372	52.8	58.3	50.0	4.1	0.0	341.6	104	30.1	16.5	1.1	0.3	1.1284	23.479	-1.832
38.	Sarati	Borewell	16.926	74.898	7.5	740	474	168	32	21.4	197.0	0.8	0.7	235.3	110	43	7	0.5	0.2	6.6143	71.9	0.5227
39.	Hanumantwadi	Borewell	17.299	74.439	8.1	1843	1180	360	132.8	6.8	280.0	0.6	0.0	175.7	500	137	1	0.1	0.3	6.4256	62.923	-4.306
40.	Karanje	Borewell	17.219	74.763	8.2	702	449	160	51.2	7.8	98.0	0.1	2.6	177.3	120	45	14	0.6	0.3	3.372	57.163	-0.204
41.	Soholi	Borewell	17.326	74.36	7.5	325	208	176	33.6	22.4	31.0	0.7	0.4	147.5	60	11	1	0.6	0.3	1.0166	27.968	-1.088
42.	Soholi	Borewell	17.326	74.36	7.9	630	403.2	272	71.6	22.6	21.2	0.3	1.3	175.6	100	34.3	14.9	0.2	0.2	0.5596	14.617	-2.511
43.	Walkhadi	Borewell	17.392	74.581	7.8	132	84	80	20.8	6.8	14.0	0.4	0.4	67.6	50	10	0.4	0.2	0.1	0.6815	27.937	-0.476
44.	Arag	Borewell	16.795	74.809	8.1	380	216	NA	35	8.0	4.0	66	3.0	Nil	110	67	2	2.91	8.0	0.1587	43.636	NA
45.	Belanki	Borewell	16.859	74.871	7.9	895	573	292	67.2	30.1	92.0	1.6	0.0	268.4	130	67	16.9	0.6	0.6	2.3441	40.952	-1.43
46.	Dudhgaon	Borewell	16.883	74.422	7.2	2400	1536	660	32	140.9	98.0	3.5	0.0	375.8	330	124	33	0.4	0.2	1.6602	24.815	-7.028
47.	Kase Digraj	Borewell	16.907	74.518	7.6	1905	1219	728	161.6	78.7	53.7	4.4	0.0	203.7	348	130	0.5	0.6	0.2	0.8664	14.414	-11.2
48.	Kupwad	Borewell	16.867	74.62	7.3	1495	957	468	136	31.1	97.0	0.6	0.0	180.6	226	108	18.1	0.2	0.2	1.9521	31.185	-6.385
49.	Madhavnagar	Borewell	16.888	74.588	7.4	3280	2099	588	176	36.0	227.0	0.8	0.0	302.6	370	50	28.9	0.3	0.2	4.075	45.728	-6.784
50.	Sangli	Borewell	16.856	74.567	7.8	1447	923	464	152	20.4	120.0	5.5	0.0	195.2	256	119	2.9	0.4	0.2	2.4256	36.658	-6.064
51.	Biloshi	Borewell	16.994	74.024	8.1	430	218	NA	190	36.0	24.0	8	0.8	Nil	220	21	6	0.32	11.0	0.4186	9.1196	NA
52.	Rile	Borewell	16.979	74.049	8.3	808	517	332	128	2.9	113.3	4.3	0.0	87.8	304	53	44	1.1	0.1	2.7078	43.196	-5.187
53.	Bhilwadi/palus	Borewell	17.068	74.554	8.2	1303	834	536	150.4	38.9	68.8	0.6	0.0	190.3	196	114	25.1	0.6	0.4	1.2936	21.936	-7.586
54.	Tasgaon	Borewell	17.034	74.604	8	1530	979	452	145.6	21.4	122.3	0.5	0.0	292.8	222	177	9	0.5	0.3	2.5043	37.14	-4.227
55.	Tasgaon	Borewell	17.034	74.604	7.8	1703	1090	352	86.4	33.0	86.0	0.4	0.0	161.0	230	84	32	0.1	0.8	1.996	34.807	-4.387

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56.	Yogewadi	Borewell	17.004	74.72	8.3	1719	1100	368	132.8	8.7	175.0	0.4	9.6	268.4	340	84	42	0.1	0.1	3.973	50.937	-2.624
57.	Achaknalli	Borewell	17.083	74.233	7.86	2050	970	340	32	63.0	313.0	0.2	0.0	409.0	266	293	0	0	0.0	7.3954	66.843	-0.076
58.	Bahe	Borewell	17.11	74.299	7.7	765	490	272	35.2	44.7	45.5	0.6	0.8	179.1	104	31	7.1	0.6	0.2	1.2008	26.852	-2.471
59.	Borgaon	Borewell	17.088	74.325	7	332	206	152	40	12.6	20.4	0.2	0.1	107.9	62	1	0.7	1	0.1	0.7207	22.739	-1.261
60.	Gatadwadi	Borewell	16.998	74.318	7.9	3450	2014	NA	365	40.0	64.0	591	8.0	Nil	403	730	346	0.89	32.0	0.849	45.421	NA
61.	Kasegaon	Borewell	17.128	74.19	8.2	840	445	NA	250	62.0	23.0	74	0.5	Nil	281	124	12	0.54	8.0	0.3375	14.133	NA
62.	Mirajwadi	Borewell	16.947	74.431	8.2	790	450	NA	165	40.0	16.0	98	7.0	Nil	183	156	6	0.52	35.0	0.29	21.743	NA
63.	Shigaon	Borewell	16.876	74.359	8.2	790	450	NA	165	40.0	16.0	98	7.0	Nil	183	156	6	0.52	35.0	0.29	21.743	NA
64.	Tandulwadi	Borewell	16.923	74.29	7	396	NA	205	46	22.0	66.0	1.8	18.0	195.0	121	6	17		0.5	2.0039	41.54	-0.31
65.	Walwa	Borewell	17.026	74.375	8.1	244	156	100	20.8	11.7	44.0	1.2	1.3	110.6	60	16	0.6	0.8	0.1	1.9138	49.294	-0.144
66.	Yellur	Borewell	16.939	74.273	7.9	281	180	132	24	17.5	25.5	1	1.0	138.9	58	12	0.6	0.2	0.4	0.966	30.086	-0.327
67.	Diganchi	Borewell	17.53	74.912	8	900	900	0	0	0.0	0.0	0	0.0	131.2	0	0	0	0	0.0	NA	NA	2.1504
68.	Diganchi	Borewell	17.533	74.911	8.1	350	350	0	0	0.0	0.0	0	0.0	0.0	49.64	0	0	0	0.0	NA	NA	0
69.	Darikonur	Borewell	17.027	75.371	7.3	432	229	148	10	29.0	36.0	0.9	0.0	131.0	67	26	5	0.7	0.0	1.304	35.52	-0.737
70.	Darikonur	Borewell	17.027	75.371	7.5	897	475	194	29	29.0	102.0	8.7	0.0	107.0	180	102	2	6.1	0.0	3.2052	54.868	-2.079
71.	Halli	Borewell	17.203	75.599	7.6	1817	966	408	102	36.0	183.0	6.3	0.0	256.0	212	160	75	1.9	0.0	3.9676	50.218	-3.855
72.	Halli	Borewell	17.203	75.599	7.6	1851	979	337	65	41.0	191.0	6.6	0.0	250.0	268	130	30	3.5	0.0	4.5681	56.165	-2.519
73.	Halli	Borewell	17.203	75.599	7.1	1864	988	316	67	35.0	162.0	6.4	0.0	59.0	268	160	48	4	0.0	3.9952	53.678	-5.255
74.	Halli	Borewell	17.203	75.599	7.5	1914	1009	337	51	50.0	188.0	6.2	0.0	214.0	256	110	35	2	0.0	4.4822	55.598	-3.15
75.	Kontev Boblad	Borewell	16.998	75.634	7.1	718	380	199	31	29.0	58.0	0.8	0.0	125.0	94	56	25	1.7	0.0	1.7993	39.276	-1.884
76.	Kontev Boblad	Borewell	16.998	75.634	7.1	846	448	255	37	39.0	43.0	0.9	0.0	149.0	82	77	73	0.78	0.0	1.1766	27.253	-2.612
77.	Kontev Boblad	Borewell	16.998	75.634	7.3	935	495	260	76	17.0	64.0	0.6	0.0	208.0	94	85	56	0.62	0.0	1.7281	35.035	-1.782
78.	Ravalgundwadi	Borewell	16.978	75.285	6.6	1114	590	260	53	30.0	61.0	0.7	0.0	125.0	126	140	3	0.7	0.0	1.6597	34.32	-3.064
79.	Siddewadi	Borewell	17.146	74.777	7.7	754	399	245	53	27.0	45.0	0.8	0.0	161.0	114	74	6	0.45	0.0	1.255	28.902	-2.227
80.	Vanjarwadi	Borewell	17.078	74.584	7.3	284	145	122	16	19.0	5.0	0.1	0.0	71.0	31	18	3	1.4	0.0	0.2002	8.5247	-1.198
81.	Vanjarwadi	Borewell	17.078	74.584	7.5	337	178	163	14	30.0	19.0	1	0.0	125.0	43	21	7	1.3	0.0	0.6569	21.204	-1.118
82.	Yelavi	Borewell	17.03	74.525	8.4	616	326	184	14	35.0	34.0	0.8	18.0	36.0	82	86	21	3.9	0.0	1.1058	29.533	-2.388
83.	Dighanchi	Borewell	17.54	74.899	7.4	2580	1698	480	184	5.0	369.0	0.1	0.0	37.0	266	846	4	4.5	0.0	7.3292	62.63	-8.986
84.	Nidhal	Borewell	17.461	74.839	8	660	455	50	10	6.0	129.0	0.2	0.0	61.0	138	90	52	NA	0.0	7.9655	85.086	0.0072
85.	K. Wangi	Borewell	17.373	74.416	7.9	1450	827	285	92	13.0	200.0	0.2	0.0	171.0	284	127	23	0.59	0.0	5.1715	60.724	-2.857
86.	Madgule	Borewell	17.371	74.984	7.6	1580	904	530	108	63.0	110.0	0.13	0.0	262.0	259	128	92	0.21	0.0	2.0813	32.618	-6.277
87.	Kadepur	Borewell	17.29	74.363	8.1	650	362	250	60	24.0	34.0	0.5	0.0	116.0	113	53	19	0.27	0.0	0.9384	23.093	-3.067

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88.	Nerli	Borewell	17.27	74.298	8.1	630	345	160	46	11.0	70.0	1.1	0.0	176.0	96	30	2.3	0.43	0.0	2.4072	48.987	-0.316
89.	Khanapur	Borewell	17.264	74.719	7.8	940	548	210	60	15.0	121.0	0.5	0.0	214.0	121	110	13	1.05	0.0	3.6202	55.515	-0.72
90.	Kalambi	Borewell	17.227	74.492	7.1	1650	922	425	124	28.0	164.0	0.27	0.0	329.0	241	168	5	0.41	0.0	3.4624	47.957	-3.099
91.	Wangi Chunchani	Borewell	17.2	74.34	8	860	484	215	56	18.0	94.0	5	0.0	159.0	149	59	22	1.09	0.0	2.7968	49.657	-1.669
92.	Wangi Chunchani	Borewell	17.2	74.34	8.2	410	229	55	18	2.0	68.0	0.4	0.0	153.0	36	24	0.9	3	0.0	4.0579	73.636	1.445
93.	Mokashiwadi	Borewell	17.196	75.167	7.4	470	279	50	14	4.0	86.0	0.5	0.0	79.0	89	35	10	1.24	0.0	5.2189	78.508	0.2672
94.	Ghatnandre	Borewell	17.183	74.881	8.1	460	225	120	40	5.0	44.0	0.6	0.0	159.0	35	24	26	1.34	0.0	1.7446	44.489	0.1987
95.	Ghatnandre	Borewell	17.183	74.881	7.5	150	74	60	18	4.0	4.0	0.8	0.0	67.0	11	2	0.8	BDL	0.0	0.2221	13.678	-0.129
96.	Ghorpadi	Borewell	17.179	74.991	7.3	500	289	50	12	5.0	88.0	7.4	0.0	85.0	103	29	1.1	0.86	0.0	5.3865	79.908	0.3831
97.	Madgyal	Borewell	17.135	75.417	8.2	500	270	30	10	1.0	83.0	0.3	0.0	85.0	85	18	29	0.46	0.0	6.6973	86.159	0.8119
98.	Arewadi	Borewell	17.116	74.947	7.4	980	555	95	34	2.0	180.0	1.1	0.0	85.0	213	72	10	0.01	0.0	8.1169	80.851	-0.468
99.	Shelkewadi	Borewell	17.099	74.901	7.3	600	322	125	40	6.0	71.0	0.3	0.0	220.0	43	25	26	0.52	0.0	2.7682	55.43	1.1162
100.	Shelkewadi	Borewell	17.099	74.901	7.2	800	441	165	44	13.0	105.0	0.3	0.0	165.0	128	56	11	0.95	0.0	3.5748	58.356	-0.561
101.	Valsang	Borewell	17.058	75.321	7.3	2600	1474	555	196	16.0	322.0	1.3	0.0	91.0	653	206	34	0.24	0.0	5.9466	55.855	-9.605
102.	Valsang	Borewell	17.058	75.321	7.4	2600	1574	790	260	34.0	230.0	0.9	0.0	311.0	373	375	145	0.33	0.0	3.5629	38.87	-10.67
103.	Chisnaa	Borewell	17.048	74.651	8.8	300	158	105	28	9.0	20.0	0.4	15.0	122.0	14	15	0.1	0.24	0.0	0.8415	29.168	0.3615
104.	Landge Wadi	Borewell	17.029	74.833	8.2	660	357	120	34	9.0	95.0	0.9	0.0	220.0	57	18	33	0.8	0.0	3.7437	63.034	1.1689
105.	Landge Wadi	Borewell	17.029	74.833	8.5	540	313	30	4	5.0	110.0	0.5	21.0	201.0	43	19	9.7	0.9	0.0	8.6579	88.705	3.3828
106.	Kavate Mahankal	Borewell	17.013	74.858	7.2	1820	741	375	114	24.0	219.0	0.5	0.0	214.0	35	138	103	0.66	0.0	4.8669	55.454	-4.155
107.	Kokale	Borewell	16.996	75.012	7.4	570	325	75	18	7.0	86.0	7.5	0.0	104.0	103	42	9	0.8	0.0	4.3576	72.738	0.2305
108.	Alkud (M)	Borewell	16.976	74.755	7.4	400	225	40	14	1.0	74.0	0.7	0.0	85.0	71	10	11	1.17	0.0	5.1517	80.565	0.6123
109.	Alkud (M)	Borewell	16.976	74.755	7.3	430	251	45	16	1.0	76.0	0.6	0.0	92.0	75	10	25	1.08	0.0	4.9821	79.042	0.6272
110.	Bamni	Borewell	16.814	74.602	7.6	4170	2528	1590	381	156.0	226.0	0.2	0.0	116.0	702	810	191	1.03	0.0	2.4637	23.683	-29.94

Annexure IX: Location of proposed check Dam in Sangli district

SN	District	Taluka	Village	Type	Longitude	Latitude
1	Sangli	Atpadi	Ambewadi	Check Dam	75.0368	17.4725
2	Sangli	Atpadi	Ambewadi	Check Dam	75.034	17.4559
3	Sangli	Atpadi	Autewadi	Check Dam	74.777	17.3006
4	Sangli	Atpadi	Autewadi	Check Dam	74.7769	17.2984
5	Sangli	Atpadi	Autewadi	Check Dam	74.7943	17.2945
6	Sangli	Atpadi	Autewadi	Check Dam	74.8028	17.2935
7	Sangli	Atpadi	Balewadi	Check Dam	74.8076	17.3396
8	Sangli	Atpadi	Balewadi	Check Dam	74.8136	17.3384
9	Sangli	Atpadi	Balewadi	Check Dam	74.8186	17.3409
10	Sangli	Atpadi	Balewadi	Check Dam	74.8085	17.3244
11	Sangli	Atpadi	Bombewadi	Check Dam	75.0207	17.4271
12	Sangli	Atpadi	Bombewadi	Check Dam	75.0252	17.4422
13	Sangli	Atpadi	Bombewadi	Check Dam	75.0199	17.4449
14	Sangli	Atpadi	Bombewadi	Check Dam	75.0149	17.4484
15	Sangli	Atpadi	Bombewadi	Check Dam	75.0258	17.4368
16	Sangli	Atpadi	Dhavadvadi	Check Dam	74.7702	17.3128
17	Sangli	Atpadi	Dhavadvadi	Check Dam	74.7711	17.3195
18	Sangli	Atpadi	Dhavadvadi	Check Dam	74.7787	17.3251
19	Sangli	Atpadi	Dighanchi	Check Dam	74.9068	17.5754
20	Sangli	Atpadi	Dighanchi	Check Dam	74.9158	17.5698
21	Sangli	Atpadi	Gomewadi	Check Dam	74.8141	17.3158
22	Sangli	Atpadi	Gomewadi	Check Dam	74.8235	17.3173
23	Sangli	Atpadi	Gomewadi	Check Dam	74.8124	17.302
24	Sangli	Atpadi	Gomewadi	Check Dam	74.8171	17.3175

SN	District	Taluka	Village	Type	Longitude	Latitude
25	Sangli	Atpadi	Gomewadi	Check Dam	74.8264	17.3214
26	Sangli	Atpadi	Hivtad	Check Dam	74.8249	17.2508
27	Sangli	Atpadi	Hivtad	Check Dam	74.8565	17.2414
28	Sangli	Atpadi	Hivtad	Check Dam	74.8615	17.267
29	Sangli	Atpadi	Hivtad	Check Dam	74.8574	17.2579
30	Sangli	Atpadi	Hivtad	Check Dam	74.8376	17.2557
31	Sangli	Atpadi	Hivtad	Check Dam	74.834	17.2567
32	Sangli	Atpadi	Kankatrewadi	Check Dam	74.8044	17.3188
33	Sangli	Atpadi	Kankatrewadi	Check Dam	74.8078	17.3179
34	Sangli	Atpadi	Kharsundi	Check Dam	74.7892	17.3313
35	Sangli	Atpadi	Kharsundi	Check Dam	74.7925	17.3335
36	Sangli	Atpadi	Manewadi	Check Dam	74.7895	17.2667
37	Sangli	Atpadi	Manewadi	Check Dam	74.7949	17.2644
38	Sangli	Atpadi	Manewadi	Check Dam	74.8075	17.2686
39	Sangli	Atpadi	Manewadi	Check Dam	74.8067	17.2616
40	Sangli	Atpadi	Nelkaranji	Check Dam	74.7875	17.2696
41	Sangli	Atpadi	Pandharewadi	Check Dam	74.9551	17.5596
42	Sangli	Atpadi	Pandharewadi	Check Dam	74.951	17.5528
43	Sangli	Atpadi	Pandharewadi	Check Dam	74.946	17.5559
44	Sangli	Atpadi	Pandharewadi	Check Dam	74.9496	17.5477
45	Sangli	Atpadi	Pimpore Kh.	Check Dam	75.0112	17.4794
46	Sangli	Atpadi	Pimpore Kh.	Check Dam	75.0363	17.4782
47	Sangli	Atpadi	Pimpore Kh.	Check Dam	75.0365	17.4828
48	Sangli	Atpadi	Pimpore Kh.	Check Dam	75.0278	17.4899
49	Sangli	Atpadi	Pujarwadi	Check Dam	74.9279	17.563

SN	District	Taluka	Village	Type	Longitude	Latitude
50	Sangli	Atpadi	Pujarwadi	Check Dam	74.9279	17.5745
51	Sangli	Atpadi	Pujarwadi	Check Dam	74.9302	17.5754
52	Sangli	Atpadi	Pujarwadi	Check Dam	74.9334	17.5711
53	Sangli	Atpadi	Pujarwadi	Check Dam	74.9346	17.5772
54	Sangli	Atpadi	Pujarwadi	Check Dam	74.9368	17.5807
55	Sangli	Atpadi	Pujarwadi	Check Dam	74.9421	17.5833
56	Sangli	Atpadi	Pujarwadi	Check Dam	74.948	17.5837
57	Sangli	Atpadi	Pujarwadi	Check Dam	74.9476	17.5807
58	Sangli	Atpadi	Pujarwadi	Check Dam	74.9519	17.5826
59	Sangli	Atpadi	Pujarwadi	Check Dam	74.9531	17.58
60	Sangli	Atpadi	Pujarwadi	Check Dam	74.9569	17.5835
61	Sangli	Atpadi	Pujarwadi	Check Dam	74.9595	17.5871
62	Sangli	Atpadi	Pujarwadi	Check Dam	74.9609	17.5865
63	Sangli	Atpadi	Pujarwadi	Check Dam	74.9608	17.5794
64	Sangli	Atpadi	Pujarwadi	Check Dam	74.952	17.5758
65	Sangli	Atpadi	Pujarwadi	Check Dam	74.9536	17.5728
66	Sangli	Atpadi	Pujarwadi	Check Dam	74.9583	17.5733
67	Sangli	Atpadi	Pujarwadi	Check Dam	74.947	17.5696
68	Sangli	Atpadi	Pujarwadi	Check Dam	74.945	17.5696
69	Sangli	Atpadi	Rajewadi	Check Dam	74.9034	17.5903
70	Sangli	Atpadi	Talewadi	Check Dam	74.8692	17.242
71	Sangli	Atpadi	Talewadi	Check Dam	74.8753	17.2534
72	Sangli	Atpadi	Talewadi	Check Dam	74.8839	17.2484
73	Sangli	Atpadi	Talewadi	Check Dam	74.8832	17.2501
74	Sangli	Atpadi	Umbergaon	Check Dam	74.956	17.5477

SN	District	Taluka	Village	Type	Longitude	Latitude
75	Sangli	Atpadi	Umbergaon	Check Dam	74.961	17.5532
76	Sangli	Atpadi	Umbergaon	Check Dam	74.966	17.5556
77	Sangli	Atpadi	Umbergaon	Check Dam	74.9719	17.5494
78	Sangli	Atpadi	Umbergaon	Check Dam	74.9794	17.5448
79	Sangli	Atpadi	Umbergaon	Check Dam	74.9806	17.5379
80	Sangli	Atpadi	Umbergaon	Check Dam	74.9672	17.5298
81	Sangli	Jath	Akkalwadi	Check Dam	75.6243	17.155
82	Sangli	Jath	Akkalwadi	Check Dam	75.6356	17.1475
83	Sangli	Jath	Akkalwadi	Check Dam	75.617	17.1254
84	Sangli	Jath	Akkalwadi	Check Dam	75.6279	17.1515
85	Sangli	Jath	Akkalwadi	Check Dam	75.6489	17.117
86	Sangli	Jath	Akkalwadi	Check Dam	75.6329	17.1264
87	Sangli	Jath	Akkalwadi	Check Dam	75.623	17.1276
88	Sangli	Jath	Akkalwadi	Check Dam	75.6455	17.1338
89	Sangli	Jath	Ankalagi	Check Dam	75.4854	17.1014
90	Sangli	Jath	Ankalagi	Check Dam	75.4749	17.1012
91	Sangli	Jath	Ankalagi	Check Dam	75.4917	17.1093
92	Sangli	Jath	Ankalagi	Check Dam	75.4861	17.1095
93	Sangli	Jath	Ankalagi	Check Dam	75.4827	17.1083
94	Sangli	Jath	Ankalagi	Check Dam	75.4812	17.1322
95	Sangli	Jath	Ankalagi	Check Dam	75.5147	17.1151
96	Sangli	Jath	Ankalagi	Check Dam	75.51	17.1112
97	Sangli	Jath	Ankalagi	Check Dam	75.4917	17.1322
98	Sangli	Jath	Ankalagi	Check Dam	75.4932	17.1378
99	Sangli	Jath	Ankalagi	Check Dam	75.5058	17.1313

SN	District	Taluka	Village	Type	Longitude	Latitude
100	Sangli	Jath	Ankalagi	Check Dam	75.5073	17.1166
101	Sangli	Jath	Ankalagi	Check Dam	75.5188	17.1223
102	Sangli	Jath	Ankalagi	Check Dam	75.5249	17.1217
103	Sangli	Jath	Ankalagi	Check Dam	75.519	17.1065
104	Sangli	Jath	Ankalagi	Check Dam	75.5324	17.1274
105	Sangli	Jath	Ankalagi	Check Dam	75.5287	17.126
106	Sangli	Jath	Ankalagi	Check Dam	75.5065	17.1376
107	Sangli	Jath	Ankalagi	Check Dam	75.5167	17.1408
108	Sangli	Jath	Ankalagi	Check Dam	75.5342	17.1226
109	Sangli	Jath	Antral	Check Dam	75.2271	17.1718
110	Sangli	Jath	Antral	Check Dam	75.2086	17.1613
111	Sangli	Jath	Antral	Check Dam	75.2028	17.1686
112	Sangli	Jath	Antral	Check Dam	75.2209	17.1791
113	Sangli	Jath	Antral	Check Dam	75.2182	17.1822
114	Sangli	Jath	Antral	Check Dam	75.2179	17.1859
115	Sangli	Jath	Antral	Check Dam	75.2159	17.1881
116	Sangli	Jath	Antral	Check Dam	75.2119	17.1915
117	Sangli	Jath	Antral	Check Dam	75.2066	17.1924
118	Sangli	Jath	Avandhi	Check Dam	75.2186	17.2126
119	Sangli	Jath	Avandhi	Check Dam	75.2036	17.2033
120	Sangli	Jath	Avandhi	Check Dam	75.1804	17.2183
121	Sangli	Jath	Avandhi	Check Dam	75.2131	17.2269
122	Sangli	Jath	Avandhi	Check Dam	75.2172	17.2196
123	Sangli	Jath	Avandhi	Check Dam	75.2243	17.2112
124	Sangli	Jath	Balgaon	Check Dam	75.6143	17.1655

SN	District	Taluka	Village	Type	Longitude	Latitude
125	Sangli	Jath	Balgaon	Check Dam	75.6126	17.1691
126	Sangli	Jath	Balgaon	Check Dam	75.6078	17.1676
127	Sangli	Jath	Balgaon	Check Dam	75.6098	17.174
128	Sangli	Jath	Balgaon	Check Dam	75.614	17.177
129	Sangli	Jath	Balgaon	Check Dam	75.6134	17.1829
130	Sangli	Jath	Balgaon	Check Dam	75.6386	17.1932
131	Sangli	Jath	Balgaon	Check Dam	75.6351	17.1896
132	Sangli	Jath	Balgaon	Check Dam	75.6251	17.1868
133	Sangli	Jath	Balgaon	Check Dam	75.6033	17.18
134	Sangli	Jath	Balgaon	Check Dam	75.5989	17.1779
135	Sangli	Jath	Balgaon	Check Dam	75.6293	17.1943
136	Sangli	Jath	Balgaon	Check Dam	75.6063	17.1947
137	Sangli	Jath	Belondgi	Check Dam	75.5458	17.1739
138	Sangli	Jath	Belondgi	Check Dam	75.5457	17.1717
139	Sangli	Jath	Belondgi	Check Dam	75.5503	17.183
140	Sangli	Jath	Belondgi	Check Dam	75.5517	17.1808
141	Sangli	Jath	Belondgi	Check Dam	75.5467	17.1787
142	Sangli	Jath	Belondgi	Check Dam	75.5481	17.173
143	Sangli	Jath	Belondgi	Check Dam	75.5521	17.1721
144	Sangli	Jath	Belondgi	Check Dam	75.539	17.1619
145	Sangli	Jath	Belondgi	Check Dam	75.54	17.1608
146	Sangli	Jath	Belondgi	Check Dam	75.5431	17.1574
147	Sangli	Jath	Belondgi	Check Dam	75.5559	17.1586
148	Sangli	Jath	Belondgi	Check Dam	75.5572	17.1577
149	Sangli	Jath	Belondgi	Check Dam	75.5522	17.1554

SN	District	Taluka	Village	Type	Longitude	Latitude
150	Sangli	Jath	Belondgi	Check Dam	75.5488	17.156
151	Sangli	Jath	Belondgi	Check Dam	75.5606	17.172
152	Sangli	Jath	Belondgi	Check Dam	75.5613	17.1711
153	Sangli	Jath	Belondgi	Check Dam	75.5558	17.1709
154	Sangli	Jath	Belondgi	Check Dam	75.5561	17.1697
155	Sangli	Jath	Belondgi	Check Dam	75.5636	17.1749
156	Sangli	Jath	Belondgi	Check Dam	75.5605	17.175
157	Sangli	Jath	Borgi Kh.	Check Dam	75.5977	17.1566
158	Sangli	Jath	Halli	Check Dam	75.5998	17.2106
159	Sangli	Jath	Halli	Check Dam	75.5972	17.2088
160	Sangli	Jath	Halli	Check Dam	75.5596	17.2003
161	Sangli	Jath	Halli	Check Dam	75.5617	17.2047
162	Sangli	Jath	Halli	Check Dam	75.5703	17.2089
163	Sangli	Jath	Halli	Check Dam	75.5661	17.2095
164	Sangli	Jath	Halli	Check Dam	75.5589	17.2034
165	Sangli	Jath	Halli	Check Dam	75.5871	17.2116
166	Sangli	Jath	Halli	Check Dam	75.609	17.2148
167	Sangli	Jath	Halli	Check Dam	75.567	17.2037
168	Sangli	Jath	Halli	Check Dam	75.5649	17.1999
169	Sangli	Jath	Halli	Check Dam	75.5615	17.1959
170	Sangli	Jath	Halli	Check Dam	75.5785	17.2046
171	Sangli	Jath	Halli	Check Dam	75.5749	17.2037
172	Sangli	Jath	Jalyal Bk.	Check Dam	75.6019	17.0668
173	Sangli	Jath	Karajagi	Check Dam	75.5389	17.1307
174	Sangli	Jath	Karajagi	Check Dam	75.5897	17.113

SN	District	Taluka	Village	Type	Longitude	Latitude
175	Sangli	Jath	Karajagi	Check Dam	75.5465	17.1036
176	Sangli	Jath	Karajagi	Check Dam	75.5573	17.1141
177	Sangli	Jath	Karajagi	Check Dam	75.5504	17.1105
178	Sangli	Jath	Kulalwadi	Check Dam	75.4885	17.1515
179	Sangli	Jath	Kulalwadi	Check Dam	75.4528	17.1122
180	Sangli	Jath	Kulalwadi	Check Dam	75.4576	17.1148
181	Sangli	Jath	Kulalwadi	Check Dam	75.4638	17.1148
182	Sangli	Jath	Kulalwadi	Check Dam	75.4678	17.107
183	Sangli	Jath	Kulalwadi	Check Dam	75.4664	17.111
184	Sangli	Jath	Kulalwadi	Check Dam	75.4668	17.1337
185	Sangli	Jath	Kulalwadi	Check Dam	75.4588	17.134
186	Sangli	Jath	Lakdewadi	Check Dam	75.4339	17.1865
187	Sangli	Jath	Lakdewadi	Check Dam	75.4218	17.185
188	Sangli	Jath	Lakdewadi	Check Dam	75.4281	17.1849
189	Sangli	Jath	Madgyal	Check Dam	75.4213	17.1517
190	Sangli	Jath	Madgyal	Check Dam	75.425	17.1498
191	Sangli	Jath	Manik Nal	Check Dam	75.633	17.1222
192	Sangli	Jath	Manik Nal	Check Dam	75.635	17.1207
193	Sangli	Jath	Manik Nal	Check Dam	75.6329	17.1164
194	Sangli	Jath	Manik Nal	Check Dam	75.6215	17.1211
195	Sangli	Jath	Manik Nal	Check Dam	75.615	17.1071
196	Sangli	Jath	Mokashawadi	Check Dam	75.1848	17.2003
197	Sangli	Jath	Mokashawadi	Check Dam	75.1635	17.2031
198	Sangli	Jath	Mokashawadi	Check Dam	75.1755	17.2057
199	Sangli	Jath	Morbagi	Check Dam	75.6226	17.0734

SN	District	Taluka	Village	Type	Longitude	Latitude
200	Sangli	Jath	Morbagi	Check Dam	75.6117	17.0686
201	Sangli	Jath	Morbagi	Check Dam	75.6072	17.1074
202	Sangli	Jath	Nigadi Bk.	Check Dam	75.5328	17.2527
203	Sangli	Jath	Nigadi Bk.	Check Dam	75.5413	17.2352
204	Sangli	Jath	Nigadi Bk.	Check Dam	75.5416	17.2392
205	Sangli	Jath	Nigadi Bk.	Check Dam	75.5265	17.2523
206	Sangli	Jath	Nigadi Bk.	Check Dam	75.5249	17.2507
207	Sangli	Jath	Nigadi Bk.	Check Dam	75.5248	17.2484
208	Sangli	Jath	Nigadi Bk.	Check Dam	75.5311	17.246
209	Sangli	Jath	Nigadi Bk.	Check Dam	75.5211	17.2415
210	Sangli	Jath	Nigadi Bk.	Check Dam	75.5187	17.2377
211	Sangli	Jath	Nigadi Bk.	Check Dam	75.5165	17.2366
212	Sangli	Jath	Nigadi Bk.	Check Dam	75.5171	17.2245
213	Sangli	Jath	Nigadi Bk.	Check Dam	75.5528	17.2151
214	Sangli	Jath	Part of Borgi Bk.	Check Dam	75.5956	17.1697
215	Sangli	Jath	Part of Borgi Bk.	Check Dam	75.5972	17.1711
216	Sangli	Jath	Part of Borgi Bk.	Check Dam	75.6009	17.1574
217	Sangli	Jath	Sankh	Check Dam	75.4944	17.1029
218	Sangli	Jath	Sankh	Check Dam	75.5047	17.1002
219	Sangli	Jath	Sankh	Check Dam	75.4829	17.0971
220	Sangli	Jath	Shegaon	Check Dam	75.1919	17.1649
221	Sangli	Jath	Shegaon	Check Dam	75.1913	17.1699
222	Sangli	Jath	Shegaon	Check Dam	75.1917	17.1541
223	Sangli	Jath	Shegaon	Check Dam	75.1819	17.1555
224	Sangli	Jath	Shegaon	Check Dam	75.1858	17.1762

SN	District	Taluka	Village	Type	Longitude	Latitude
225	Sangli	Jath	Shegaon	Check Dam	75.1857	17.2045
226	Sangli	Jath	Shegaon	Check Dam	75.1999	17.198
227	Sangli	Jath	Singanhalli	Check Dam	75.165	17.2073
228	Sangli	Jath	Sonalagi	Check Dam	75.6577	17.2309
229	Sangli	Jath	Sonalagi	Check Dam	75.6568	17.2329
230	Sangli	Jath	Sonalagi	Check Dam	75.6472	17.2566
231	Sangli	Jath	Sonalagi	Check Dam	75.6575	17.2465
232	Sangli	Jath	Sonalagi	Check Dam	75.6522	17.2312
233	Sangli	Jath	Sonyal	Check Dam	75.4745	17.2001
234	Sangli	Jath	Sonyal	Check Dam	75.4724	17.199
235	Sangli	Jath	Sonyal	Check Dam	75.4465	17.1923
236	Sangli	Jath	Sonyal	Check Dam	75.4501	17.1937
237	Sangli	Jath	Sonyal	Check Dam	75.467	17.1728
238	Sangli	Jath	Sonyal	Check Dam	75.4803	17.174
239	Sangli	Jath	Sonyal	Check Dam	75.4795	17.182
240	Sangli	Jath	Sonyal	Check Dam	75.4751	17.1838
241	Sangli	Jath	Sonyal	Check Dam	75.4848	17.1834
242	Sangli	Jath	Sonyal	Check Dam	75.4555	17.1648
243	Sangli	Jath	Sonyal	Check Dam	75.4578	17.1702
244	Sangli	Jath	Sonyal	Check Dam	75.4549	17.1935
245	Sangli	Jath	Sonyal	Check Dam	75.4503	17.1995
246	Sangli	Jath	Sonyal	Check Dam	75.4616	17.2004
247	Sangli	Jath	Suslad	Check Dam	75.66	17.2122
248	Sangli	Jath	Suslad	Check Dam	75.6562	17.2053
249	Sangli	Jath	Suslad	Check Dam	75.6434	17.2018

SN	District	Taluka	Village	Type	Longitude	Latitude
250	Sangli	Jath	Suslad	Check Dam	75.6232	17.22
251	Sangli	Jath	Suslad	Check Dam	75.6139	17.2191
252	Sangli	Jath	Suslad	Check Dam	75.62	17.2223
253	Sangli	Jath	Suslad	Check Dam	75.622	17.2259
254	Sangli	Jath	Suslad	Check Dam	75.6537	17.2108
255	Sangli	Jath	Suslad	Check Dam	75.6486	17.2156
256	Sangli	Jath	Umadi	Check Dam	75.61	17.2895
257	Sangli	Jath	Umadi	Check Dam	75.6153	17.285
258	Sangli	Jath	Umadi	Check Dam	75.62	17.2802
259	Sangli	Jath	Umadi	Check Dam	75.6086	17.2781
260	Sangli	Jath	Umadi	Check Dam	75.6075	17.2763
261	Sangli	Jath	Umadi	Check Dam	75.6019	17.2739
262	Sangli	Jath	Umadi	Check Dam	75.5883	17.2706
263	Sangli	Jath	Umadi	Check Dam	75.5788	17.2719
264	Sangli	Jath	Umadi	Check Dam	75.5767	17.2775
265	Sangli	Jath	Umadi	Check Dam	75.573	17.2816
266	Sangli	Jath	Umadi	Check Dam	75.5637	17.2782
267	Sangli	Jath	Umadi	Check Dam	75.5417	17.2632
268	Sangli	Jath	Umadi	Check Dam	75.5422	17.2664
269	Sangli	Jath	Umadi	Check Dam	75.5448	17.2616
270	Sangli	Jath	Umadi	Check Dam	75.5466	17.2745
271	Sangli	Jath	Umadi	Check Dam	75.5516	17.2586
272	Sangli	Jath	Umadi	Check Dam	75.5636	17.2679
273	Sangli	Jath	Umadi	Check Dam	75.5369	17.2606
274	Sangli	Jath	Umadi	Check Dam	75.5354	17.2592

SN	District	Taluka	Village	Type	Longitude	Latitude
275	Sangli	Jath	Umadi	Check Dam	75.5572	17.2402
276	Sangli	Jath	Umadi	Check Dam	75.5553	17.2402
277	Sangli	Jath	Umadi	Check Dam	75.547	17.2409
278	Sangli	Jath	Umadi	Check Dam	75.5461	17.2363
279	Sangli	Jath	Umadi	Check Dam	75.5434	17.2699
280	Sangli	Jath	Umadi	Check Dam	75.5637	17.2257
281	Sangli	Jath	Umadi	Check Dam	75.5951	17.2199
282	Sangli	Jath	Umadi	Check Dam	75.5973	17.2219
283	Sangli	Jath	Umadi	Check Dam	75.5989	17.2247
284	Sangli	Jath	Umadi	Check Dam	75.603	17.2301
285	Sangli	Jath	Umadi	Check Dam	75.6107	17.2417
286	Sangli	Jath	Umadi	Check Dam	75.6117	17.2371
287	Sangli	Jath	Utagi	Check Dam	75.5107	17.2275
288	Sangli	Jath	Utagi	Check Dam	75.5133	17.2312
289	Sangli	Jath	Utagi	Check Dam	75.5076	17.2224
290	Sangli	Jath	Utagi	Check Dam	75.5035	17.2231
291	Sangli	Jath	Utagi	Check Dam	75.5014	17.222
292	Sangli	Jath	Utagi	Check Dam	75.51	17.2212
293	Sangli	Jath	Utagi	Check Dam	75.4944	17.2166
294	Sangli	Jath	Utagi	Check Dam	75.4954	17.2139
295	Sangli	Jath	Utagi	Check Dam	75.4967	17.2188
296	Sangli	Jath	Utagi	Check Dam	75.4993	17.2192
297	Sangli	Jath	Utagi	Check Dam	75.5022	17.2089
298	Sangli	Jath	Utagi	Check Dam	75.5038	17.2087
299	Sangli	Jath	Utagi	Check Dam	75.496	17.2086

SN	District	Taluka	Village	Type	Longitude	Latitude
300	Sangli	Jath	Utagi	Check Dam	75.4907	17.2067
301	Sangli	Jath	Utagi	Check Dam	75.4847	17.205
302	Sangli	Jath	Utagi	Check Dam	75.4784	17.2061
303	Sangli	Jath	Utagi	Check Dam	75.4813	17.2083
304	Sangli	Jath	Utagi	Check Dam	75.4858	17.2122
305	Sangli	Jath	Utagi	Check Dam	75.4885	17.2143
306	Sangli	Jath	Utagi	Check Dam	75.4907	17.1647
307	Sangli	Jath	Utagi	Check Dam	75.4944	17.1675
308	Sangli	Jath	Utagi	Check Dam	75.4958	17.1701
309	Sangli	Jath	Utagi	Check Dam	75.4994	17.1749
310	Sangli	Jath	Utagi	Check Dam	75.5035	17.1728
311	Sangli	Jath	Utagi	Check Dam	75.5056	17.171
312	Sangli	Jath	Utagi	Check Dam	75.5024	17.1648
313	Sangli	Jath	Utagi	Check Dam	75.4982	17.1594
314	Sangli	Jath	Utagi	Check Dam	75.4854	17.1541
315	Sangli	Jath	Utagi	Check Dam	75.5083	17.163
316	Sangli	Jath	Utagi	Check Dam	75.5112	17.1643
317	Sangli	Jath	Utagi	Check Dam	75.5157	17.1687
318	Sangli	Jath	Utagi	Check Dam	75.5176	17.1682
319	Sangli	Jath	Utagi	Check Dam	75.5196	17.1685
320	Sangli	Jath	Utagi	Check Dam	75.4968	17.18
321	Sangli	Jath	Utagi	Check Dam	75.5097	17.18
322	Sangli	Jath	Utagi	Check Dam	75.5114	17.1812
323	Sangli	Jath	Utagi	Check Dam	75.5137	17.1848
324	Sangli	Jath	Utagi	Check Dam	75.512	17.169

SN	District	Taluka	Village	Type	Longitude	Latitude
325	Sangli	Jath	Utagi	Check Dam	75.5182	17.1632
326	Sangli	Jath	Utagi	Check Dam	75.5228	17.1652
327	Sangli	Jath	Utagi	Check Dam	75.5265	17.1649
328	Sangli	Jath	Utagi	Check Dam	75.5289	17.1649
329	Sangli	Jath	Utagi	Check Dam	75.5305	17.1634
330	Sangli	Jath	Utagi	Check Dam	75.5337	17.1622
331	Sangli	Jath	Utagi	Check Dam	75.5357	17.1615
332	Sangli	Jath	Utagi	Check Dam	75.5254	17.1681
333	Sangli	Jath	Utagi	Check Dam	75.5277	17.1685
334	Sangli	Jath	Utagi	Check Dam	75.5215	17.1826
335	Sangli	Jath	Utagi	Check Dam	75.5326	17.171
336	Sangli	Jath	Utagi	Check Dam	75.5317	17.1736
337	Sangli	Jath	Utagi	Check Dam	75.5347	17.1693
338	Sangli	Jath	Utagi	Check Dam	75.5341	17.1667
339	Sangli	Jath	Utagi	Check Dam	75.5369	17.1725
340	Sangli	Jath	Utagi	Check Dam	75.5286	17.1877
341	Sangli	Jath	Utagi	Check Dam	75.5231	17.1872
342	Sangli	Jath	Utagi	Check Dam	75.5262	17.1917
343	Sangli	Jath	Utagi	Check Dam	75.5293	17.1937
344	Sangli	Jath	Utagi	Check Dam	75.5325	17.1892
345	Sangli	Jath	Utagi	Check Dam	75.5324	17.1955
346	Sangli	Jath	Utagi	Check Dam	75.5326	17.1936
347	Sangli	Jath	Utagi	Check Dam	75.5358	17.1897
348	Sangli	Jath	Utagi	Check Dam	75.544	17.1777
349	Sangli	Jath	Utagi	Check Dam	75.537	17.1588

SN	District	Taluka	Village	Type	Longitude	Latitude
350	Sangli	Jath	Utagi	Check Dam	75.555	17.1922
351	Sangli	Jath	Utagi	Check Dam	75.557	17.1913
352	Sangli	Jath	Utagi	Check Dam	75.4791	17.1537
353	Sangli	Jath	Vhaspeth	Check Dam	75.438	17.1213
354	Sangli	Jath	Vhaspeth	Check Dam	75.4438	17.1179
355	Sangli	Kadegaon	Apsinge	Check Dam	74.2736	17.2839
356	Sangli	Kadegaon	Apsinge	Check Dam	74.2637	17.2834
357	Sangli	Kadegaon	Kadepur	Check Dam	74.338	17.2805
358	Sangli	Kadegaon	Kadepur	Check Dam	74.3414	17.2779
359	Sangli	Kadegaon	Kotawade	Check Dam	74.286	17.2495
360	Sangli	Kadegaon	Kotawade	Check Dam	74.2679	17.2671
361	Sangli	Kadegaon	Nerli	Check Dam	74.3081	17.2572
362	Sangli	Kadegaon	Nerli	Check Dam	74.3118	17.261
363	Sangli	Kadegaon	Nerli	Check Dam	74.2888	17.2884
364	Sangli	Kadegaon	Shirasgaon	Check Dam	74.3119	17.2325
365	Sangli	Kadegaon	Shirasgaon	Check Dam	74.3181	17.2379
366	Sangli	Kadegaon	Shirasgaon	Check Dam	74.306	17.2473
367	Sangli	Kadegaon	Sonkire	Check Dam	74.3212	17.2362
368	Sangli	Kadegaon	Sonkire	Check Dam	74.3288	17.2312
369	Sangli	Kadegaon	Sonkire	Check Dam	74.3203	17.2138
370	Sangli	Kadegaon	Sonsal	Check Dam	74.2863	17.2243
371	Sangli	Kadegaon	Sonsal	Check Dam	74.2822	17.2128
372	Sangli	Kadegaon	Wangi	Check Dam	74.362	17.2225
373	Sangli	Kadegaon	Wangi	Check Dam	74.3618	17.2297
374	Sangli	Kavthe Mahankal	Alkud (M)	Check Dam	74.7561	16.987

SN	District	Taluka	Village	Type	Longitude	Latitude
375	Sangli	Kavthe Mahankal	Alkud (M)	Check Dam	74.7617	16.9852
376	Sangli	Kavthe Mahankal	Chorochoi	Check Dam	75.0192	17.1458
377	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0117	17.1095
378	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0152	17.1125
379	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0176	17.1094
380	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0249	17.106
381	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0266	17.1083
382	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0312	17.1069
383	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0368	17.1105
384	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0341	17.1093
385	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0333	17.1076
386	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0385	17.1095
387	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0326	17.1214
388	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0198	17.1161
389	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0151	17.1242
390	Sangli	Kavthe Mahankal	Chudekhindi	Check Dam	75.0113	17.1191
391	Sangli	Kavthe Mahankal	Deshing	Check Dam	74.795	16.9944
392	Sangli	Kavthe Mahankal	Deshing	Check Dam	74.8036	16.9976
393	Sangli	Kavthe Mahankal	Deshing	Check Dam	74.7974	17.0028
394	Sangli	Kavthe Mahankal	Dhalgaon	Check Dam	75.0071	17.1107
395	Sangli	Kavthe Mahankal	Dhalgaon	Check Dam	74.999	17.1118
396	Sangli	Kavthe Mahankal	Dhalgaon	Check Dam	75.0012	17.1168
397	Sangli	Kavthe Mahankal	Dhalgaon	Check Dam	74.9951	17.1236
398	Sangli	Kavthe Mahankal	Dhalgaon	Check Dam	74.9866	17.1228
399	Sangli	Kavthe Mahankal	Dhalgaon	Check Dam	74.9847	17.1283

SN	District	Taluka	Village	Type	Longitude	Latitude
400	Sangli	Kavthe Mahankal	Dhalgaon	Check Dam	74.9866	17.1321
401	Sangli	Kavthe Mahankal	Dhalgaon	Check Dam	74.9907	17.1381
402	Sangli	Kavthe Mahankal	Dhalgaon	Check Dam	74.9911	17.1362
403	Sangli	Kavthe Mahankal	Dhalgaon	Check Dam	74.9908	17.1336
404	Sangli	Kavthe Mahankal	Dhalgaon	Check Dam	75.0016	17.1344
405	Sangli	Kavthe Mahankal	Dhalgaon	Check Dam	75.0032	17.1392
406	Sangli	Kavthe Mahankal	Garjewadi (N.V)	Check Dam	74.8601	17.1299
407	Sangli	Kavthe Mahankal	Garjewadi (N.V)	Check Dam	74.8673	17.1328
408	Sangli	Kavthe Mahankal	Garjewadi (N.V)	Check Dam	74.8761	17.1287
409	Sangli	Kavthe Mahankal	Garjewadi (N.V)	Check Dam	74.8753	17.1321
410	Sangli	Kavthe Mahankal	Garjewadi (N.V)	Check Dam	74.8573	17.1207
411	Sangli	Kavthe Mahankal	Ghatnandre	Check Dam	74.8583	17.1896
412	Sangli	Kavthe Mahankal	Ghatnandre	Check Dam	74.8567	17.1876
413	Sangli	Kavthe Mahankal	Ghatnandre	Check Dam	74.8571	17.184
414	Sangli	Kavthe Mahankal	Ghatnandre	Check Dam	74.863	17.1866
415	Sangli	Kavthe Mahankal	Ghatnandre	Check Dam	74.8765	17.1769
416	Sangli	Kavthe Mahankal	Ghatnandre	Check Dam	74.8649	17.1654
417	Sangli	Kavthe Mahankal	Jakhapur	Check Dam	74.861	17.098
418	Sangli	Kavthe Mahankal	Jakhapur	Check Dam	74.8551	17.0916
419	Sangli	Kavthe Mahankal	Jakhapur	Check Dam	74.8577	17.0896
420	Sangli	Kavthe Mahankal	Jakhapur	Check Dam	74.8594	17.0938
421	Sangli	Kavthe Mahankal	Jakhapur	Check Dam	74.8705	17.1003
422	Sangli	Kavthe Mahankal	Jambul Wadi	Check Dam	75.0378	17.129
423	Sangli	Kavthe Mahankal	Jaygavhan	Check Dam	74.835	17.0518
424	Sangli	Kavthe Mahankal	Kerewadi	Check Dam	74.9192	17.1258

SN	District	Taluka	Village	Type	Longitude	Latitude
425	Sangli	Kavthe Mahankal	Kuchi	Check Dam	74.8364	17.0507
426	Sangli	Kavthe Mahankal	Kundlapur	Check Dam	74.8592	17.1157
427	Sangli	Kavthe Mahankal	Kundlapur	Check Dam	74.8795	17.1219
428	Sangli	Kavthe Mahankal	Kundlapur	Check Dam	74.8809	17.1182
429	Sangli	Kavthe Mahankal	Kundlapur	Check Dam	74.881	17.1148
430	Sangli	Kavthe Mahankal	Kundlapur	Check Dam	74.8929	17.1196
431	Sangli	Kavthe Mahankal	Landge Wadi	Check Dam	74.8346	17.0443
432	Sangli	Kavthe Mahankal	Landge Wadi	Check Dam	74.8388	17.0422
433	Sangli	Kavthe Mahankal	Landge Wadi	Check Dam	74.8419	17.0343
434	Sangli	Kavthe Mahankal	Landge Wadi	Check Dam	74.826	17.0224
435	Sangli	Kavthe Mahankal	Shelkewadi	Check Dam	74.8903	17.0984
436	Sangli	Kavthe Mahankal	Shelkewadi	Check Dam	74.8945	17.0881
437	Sangli	Kavthe Mahankal	Shirdhon	Check Dam	74.8209	17.0367
438	Sangli	Kavthe Mahankal	Shirdhon	Check Dam	74.8216	17.0285
439	Sangli	Kavthe Mahankal	Tisangi	Check Dam	74.8474	17.163
440	Sangli	Kavthe Mahankal	Tisangi	Check Dam	74.8514	17.1569
441	Sangli	Kavthe Mahankal	Tisangi	Check Dam	74.8469	17.1532
442	Sangli	Kavthe Mahankal	Tisangi	Check Dam	74.8418	17.1475
443	Sangli	Kavthe Mahankal	Tisangi	Check Dam	74.8603	17.1408
444	Sangli	Kavthe Mahankal	Tisangi	Check Dam	74.8737	17.1428
445	Sangli	Kavthe Mahankal	Tisangi	Check Dam	74.8642	17.1503
446	Sangli	Kavthe Mahankal	Tisangi	Check Dam	74.8554	17.1421
447	Sangli	Kavthe Mahankal	Wagholi	Check Dam	74.887	17.1336
448	Sangli	Khanapur	Ainwadi	Check Dam	74.6695	17.2799
449	Sangli	Khanapur	Ainwadi	Check Dam	74.6677	17.2845

SN	District	Taluka	Village	Type	Longitude	Latitude
450	Sangli	Khanapur	Ainwadi	Check Dam	74.6571	17.2982
451	Sangli	Khanapur	Ainwadi	Check Dam	74.6603	17.2956
452	Sangli	Khanapur	Ainwadi	Check Dam	74.6824	17.263
453	Sangli	Khanapur	Ainwadi	Check Dam	74.6749	17.2693
454	Sangli	Khanapur	Bhadake Wadi	Check Dam	74.7021	17.2349
455	Sangli	Khanapur	Bhadake Wadi	Check Dam	74.7102	17.2184
456	Sangli	Khanapur	Dhondgewadi	Check Dam	74.6618	17.2819
457	Sangli	Khanapur	Dhondgewadi	Check Dam	74.6613	17.2713
458	Sangli	Khanapur	Dhondi Wadi	Check Dam	74.7198	17.218
459	Sangli	Khanapur	Dhondi Wadi	Check Dam	74.7238	17.2074
460	Sangli	Khanapur	Ghoti Bk.	Check Dam	74.6306	17.2443
461	Sangli	Khanapur	Ghoti Bk.	Check Dam	74.6324	17.241
462	Sangli	Khanapur	Ghoti Bk.	Check Dam	74.6301	17.2375
463	Sangli	Khanapur	Ghoti Bk.	Check Dam	74.6328	17.2343
464	Sangli	Khanapur	Ghoti Bk.	Check Dam	74.6342	17.2295
465	Sangli	Khanapur	Ghoti Bk.	Check Dam	74.6312	17.2239
466	Sangli	Khanapur	Ghoti Bk.	Check Dam	74.635	17.2464
467	Sangli	Khanapur	Ghoti Bk.	Check Dam	74.6389	17.2434
468	Sangli	Khanapur	Ghoti Bk.	Check Dam	74.6478	17.2455
469	Sangli	Khanapur	Ghoti Bk.	Check Dam	74.6284	17.2338
470	Sangli	Khanapur	Ghoti Kh.	Check Dam	74.6622	17.2646
471	Sangli	Khanapur	Ghoti Kh.	Check Dam	74.6595	17.2599
472	Sangli	Khanapur	Ghoti Kh.	Check Dam	74.6484	17.2518
473	Sangli	Khanapur	Ghoti Kh.	Check Dam	74.6423	17.253
474	Sangli	Khanapur	Ghoti Kh.	Check Dam	74.6525	17.2473

SN	District	Taluka	Village	Type	Longitude	Latitude
475	Sangli	Khanapur	Ghoti Kh.	Check Dam	74.6714	17.2616
476	Sangli	Khanapur	Jadhav Wadi	Check Dam	74.6652	17.2936
477	Sangli	Khanapur	Jadhav Wadi	Check Dam	74.6726	17.291
478	Sangli	Khanapur	Lengare	Check Dam	74.6461	17.2931
479	Sangli	Khanapur	Lengare	Check Dam	74.6418	17.2975
480	Sangli	Khanapur	Mohi	Check Dam	74.73	17.2159
481	Sangli	Khanapur	Para	Check Dam	74.6167	17.2205
482	Sangli	Khanapur	Para	Check Dam	74.6175	17.2229
483	Sangli	Khanapur	Para	Check Dam	74.613	17.2193
484	Sangli	Khanapur	Para	Check Dam	74.613	17.2155
485	Sangli	Khanapur	Para	Check Dam	74.609	17.2159
486	Sangli	Khanapur	Para	Check Dam	74.6108	17.2116
487	Sangli	Khanapur	Para	Check Dam	74.6106	17.2179
488	Sangli	Khanapur	Para	Check Dam	74.6111	17.2295
489	Sangli	Khanapur	Para	Check Dam	74.6124	17.2309
490	Sangli	Khanapur	Para	Check Dam	74.6095	17.2298
491	Sangli	Khanapur	Para	Check Dam	74.607	17.2301
492	Sangli	Khanapur	Para	Check Dam	74.6078	17.2334
493	Sangli	Khanapur	Para	Check Dam	74.6072	17.2071
494	Sangli	Khanapur	Posewadi	Check Dam	74.6751	17.2605
495	Sangli	Khanapur	Posewadi	Check Dam	74.6764	17.2588
496	Sangli	Khanapur	Posewadi	Check Dam	74.6963	17.2451
497	Sangli	Khanapur	Posewadi	Check Dam	74.6772	17.2664
498	Sangli	Khanapur	Renavi	Check Dam	74.6324	17.2738
499	Sangli	Khanapur	Renavi	Check Dam	74.6268	17.272

SN	District	Taluka	Village	Type	Longitude	Latitude
500	Sangli	Khanapur	Renavi	Check Dam	74.6191	17.2712
501	Sangli	Khanapur	Renavi	Check Dam	74.6231	17.2739
502	Sangli	Khanapur	Renavi	Check Dam	74.6123	17.2638
503	Sangli	Khanapur	Renavi	Check Dam	74.6195	17.2658
504	Sangli	Khanapur	Renavi	Check Dam	74.6215	17.2629
505	Sangli	Khanapur	Renavi	Check Dam	74.6202	17.2619
506	Sangli	Khanapur	Renavi	Check Dam	74.6164	17.2583
507	Sangli	Khanapur	Renavi	Check Dam	74.6155	17.2558
508	Sangli	Khanapur	Renavi	Check Dam	74.615	17.251
509	Sangli	Khanapur	Renavi	Check Dam	74.6138	17.2481
510	Sangli	Khanapur	Renavi	Check Dam	74.6367	17.2931
511	Sangli	Khanapur	Renavi	Check Dam	74.6294	17.2781
512	Sangli	Khanapur	Rewangaon	Check Dam	74.6423	17.2882
513	Sangli	Khanapur	Rewangaon	Check Dam	74.6508	17.2905
514	Sangli	Khanapur	Rewangaon	Check Dam	74.6484	17.2806
515	Sangli	Khanapur	Rewangaon	Check Dam	74.6573	17.2785
516	Sangli	Khanapur	Rewangaon	Check Dam	74.6572	17.2855
517	Sangli	Khanapur	Rewangaon	Check Dam	74.6381	17.2812
518	Sangli	Khanapur	Rewangaon	Check Dam	74.6551	17.2792
519	Sangli	Khanapur	Rewangaon	Check Dam	74.6495	17.2939
520	Sangli	Khanapur	Rewangaon	Check Dam	74.639	17.2955
521	Sangli	Khanapur	Shendge Wadi	Check Dam	74.7164	17.2223
522	Sangli	Miraj	Bhose	Check Dam	74.7182	16.9184
523	Sangli	Miraj	Bhose	Check Dam	74.7369	16.9198
524	Sangli	Miraj	Bhose	Check Dam	74.7232	16.919

SN	District	Taluka	Village	Type	Longitude	Latitude
525	Sangli	Miraj	Bhose	Check Dam	74.7215	16.929
526	Sangli	Miraj	Kalambi	Check Dam	74.7061	16.9127
527	Sangli	Miraj	Kalambi	Check Dam	74.6935	16.9107
528	Sangli	Miraj	Kharkatwadi	Check Dam	74.6966	16.9182
529	Sangli	Miraj	Malgaon	Check Dam	74.7036	16.8893
530	Sangli	Miraj	Malgaon	Check Dam	74.7044	16.8836
531	Sangli	Miraj	Malgaon	Check Dam	74.7118	16.8893
532	Sangli	Miraj	Malgaon	Check Dam	74.7274	16.892
533	Sangli	Miraj	Malgaon	Check Dam	74.7433	16.8995
534	Sangli	Miraj	Siddhewadi	Check Dam	74.7224	16.9151
535	Sangli	Miraj	Siddhewadi	Check Dam	74.7431	16.9169
536	Sangli	Miraj	Siddhewadi	Check Dam	74.7452	16.9235
537	Sangli	Tasgaon	Dhonde Wadi	Check Dam	74.6546	17.1948
538	Sangli	Tasgaon	Hatnoor	Check Dam	74.6294	17.1794
539	Sangli	Tasgaon	Narsewadi	Check Dam	74.6508	17.201
540	Sangli	Tasgaon	Ped	Check Dam	74.647	17.1821
541	Sangli	Tasgaon	Ped	Check Dam	74.6621	17.185
542	Sangli	Tasgaon	Ped	Check Dam	74.6601	17.1797
543	Sangli	Tasgaon	Ped	Check Dam	74.672	17.174
544	Sangli	Tasgaon	Ped	Check Dam	74.6895	17.1979
545	Sangli	Tasgaon	Ped	Check Dam	74.6855	17.2165
546	Sangli	Tasgaon	Vijaynagar	Check Dam	74.68	17.2138

Annexure X: Location of proposed Percolation Tank in Sangli district

SN	District	Taluka	Village	Type	Longitude	Latitude
1	Sangli	Atpadi	Autewadi	Percolation Tank	74.7871	17.2919
2	Sangli	Atpadi	Autewadi	Percolation Tank	74.7793	17.3069
3	Sangli	Atpadi	Balewadi	Percolation Tank	74.8163	17.3339
4	Sangli	Atpadi	Balewadi	Percolation Tank	74.8066	17.3318
5	Sangli	Atpadi	Balewadi	Percolation Tank	74.8288	17.3386
6	Sangli	Atpadi	Dhavadvadi	Percolation Tank	74.7754	17.3179
7	Sangli	Atpadi	Dhavadvadi	Percolation Tank	74.7793	17.3135
8	Sangli	Atpadi	Gomewadi	Percolation Tank	74.8188	17.3021
9	Sangli	Atpadi	Gomewadi	Percolation Tank	74.8199	17.3155
10	Sangli	Atpadi	Hivtad	Percolation Tank	74.8182	17.2582
11	Sangli	Atpadi	Hivtad	Percolation Tank	74.8457	17.2591
12	Sangli	Atpadi	Hivtad	Percolation Tank	74.8539	17.2655
13	Sangli	Atpadi	Hivtad	Percolation Tank	74.8522	17.2433
14	Sangli	Atpadi	Kargani	Percolation Tank	74.8811	17.2849
15	Sangli	Atpadi	Kargani	Percolation Tank	74.8974	17.2982
16	Sangli	Atpadi	Kharsundi	Percolation Tank	74.7932	17.33
17	Sangli	Atpadi	Manewadi	Percolation Tank	74.7953	17.2759
18	Sangli	Atpadi	Manewadi	Percolation Tank	74.8168	17.2751
19	Sangli	Atpadi	Mitki	Percolation Tank	74.8182	17.3495
20	Sangli	Atpadi	Mitki	Percolation Tank	74.8395	17.3461
21	Sangli	Atpadi	Nelkaranji	Percolation Tank	74.7781	17.2826
22	Sangli	Atpadi	Nelkaranji	Percolation Tank	74.7799	17.2746
23	Sangli	Atpadi	Nelkaranji	Percolation Tank	74.7705	17.268
24	Sangli	Atpadi	Nelkaranji	Percolation Tank	74.7795	17.2616

25	Sangli	Atpadi	Talewadi	Percolation Tank	74.8901	17.2604
26	Sangli	Atpadi	Talewadi	Percolation Tank	74.8967	17.2468
27	Sangli	Atpadi	Talewadi	Percolation Tank	74.8833	17.2644
28	Sangli	Atpadi	Talewadi	Percolation Tank	74.904	17.283
29	Sangli	Jath	Akkalwadi	Percolation Tank	75.6446	17.1245
30	Sangli	Jath	Akkalwadi	Percolation Tank	75.6368	17.1347
31	Sangli	Jath	Akkalwadi	Percolation Tank	75.623	17.134
32	Sangli	Jath	Ankalagi	Percolation Tank	75.4878	17.1266
33	Sangli	Jath	Ankalagi	Percolation Tank	75.4782	17.1065
34	Sangli	Jath	Ankalagi	Percolation Tank	75.4983	17.1227
35	Sangli	Jath	Ankalagi	Percolation Tank	75.5114	17.1254
36	Sangli	Jath	Ankalagi	Percolation Tank	75.5204	17.1295
37	Sangli	Jath	Ankalagi	Percolation Tank	75.522	17.1365
38	Sangli	Jath	Ankalagi	Percolation Tank	75.5014	17.1457
39	Sangli	Jath	Antral	Percolation Tank	75.2068	17.1872
40	Sangli	Jath	Avandhi	Percolation Tank	75.2025	17.2147
41	Sangli	Jath	Avandhi	Percolation Tank	75.2069	17.2199
42	Sangli	Jath	Avandhi	Percolation Tank	75.1991	17.2307
43	Sangli	Jath	Balgaon	Percolation Tank	75.5942	17.1755
44	Sangli	Jath	Balgaon	Percolation Tank	75.6068	17.1777
45	Sangli	Jath	Balgaon	Percolation Tank	75.6182	17.1672
46	Sangli	Jath	Balgaon	Percolation Tank	75.6184	17.1878
47	Sangli	Jath	Balgaon	Percolation Tank	75.6317	17.1971
48	Sangli	Jath	Belondgi	Percolation Tank	75.5419	17.1528
49	Sangli	Jath	Belondgi	Percolation Tank	75.5489	17.1743

50	Sangli	Jath	Belondgi	Percolation Tank	75.5509	17.1783
51	Sangli	Jath	Belondgi	Percolation Tank	75.5688	17.1732
52	Sangli	Jath	Belondgi	Percolation Tank	75.5566	17.1532
53	Sangli	Jath	Belondgi	Percolation Tank	75.5609	17.1603
54	Sangli	Jath	Belondgi	Percolation Tank	75.5585	17.1876
55	Sangli	Jath	Belondgi	Percolation Tank	75.5548	17.1832
56	Sangli	Jath	Bhivargi	Percolation Tank	75.5919	17.0687
57	Sangli	Jath	Borgi Kh.	Percolation Tank	75.6074	17.1263
58	Sangli	Jath	Halli	Percolation Tank	75.5596	17.2097
59	Sangli	Jath	Halli	Percolation Tank	75.5753	17.2115
60	Sangli	Jath	Halli	Percolation Tank	75.5671	17.1978
61	Sangli	Jath	Halli	Percolation Tank	75.6115	17.2119
62	Sangli	Jath	Halli	Percolation Tank	75.6044	17.2079
63	Sangli	Jath	Kulalwadi	Percolation Tank	75.4528	17.1187
64	Sangli	Jath	Kulalwadi	Percolation Tank	75.4591	17.1215
65	Sangli	Jath	Kulalwadi	Percolation Tank	75.4743	17.11
66	Sangli	Jath	Kulalwadi	Percolation Tank	75.4601	17.1427
67	Sangli	Jath	Lakdewadi	Percolation Tank	75.4315	17.1805
68	Sangli	Jath	Lakdewadi	Percolation Tank	75.441	17.1836
69	Sangli	Jath	Manik Nal	Percolation Tank	75.6206	17.1171
70	Sangli	Jath	Manik Nal	Percolation Tank	75.6255	17.1113
71	Sangli	Jath	Manik Nal	Percolation Tank	75.6094	17.1153
72	Sangli	Jath	Mokashawadi	Percolation Tank	75.1769	17.2009
73	Sangli	Jath	Mokashawadi	Percolation Tank	75.1602	17.1984
74	Sangli	Jath	Morbagi	Percolation Tank	75.604	17.0788

75	Sangli	Jath	Nigadi Bk.	Percolation Tank	75.5301	17.242
76	Sangli	Jath	Nigadi Bk.	Percolation Tank	75.5332	17.2485
77	Sangli	Jath	Nigadi Bk.	Percolation Tank	75.5187	17.229
78	Sangli	Jath	Sankh	Percolation Tank	75.49	17.0991
79	Sangli	Jath	Sankh	Percolation Tank	75.4973	17.0958
80	Sangli	Jath	Shegaon	Percolation Tank	75.1999	17.1758
81	Sangli	Jath	Shegaon	Percolation Tank	75.1861	17.1634
82	Sangli	Jath	Shegaon	Percolation Tank	75.188	17.1548
83	Sangli	Jath	Sonalagi	Percolation Tank	75.6518	17.2372
84	Sangli	Jath	Sonalagi	Percolation Tank	75.6499	17.241
85	Sangli	Jath	Sonyal	Percolation Tank	75.4323	17.1548
86	Sangli	Jath	Sonyal	Percolation Tank	75.4791	17.1858
87	Sangli	Jath	Sonyal	Percolation Tank	75.4516	17.1891
88	Sangli	Jath	Sonyal	Percolation Tank	75.4531	17.2072
89	Sangli	Jath	Sonyal	Percolation Tank	75.4684	17.2073
90	Sangli	Jath	Sonyal	Percolation Tank	75.4706	17.1833
91	Sangli	Jath	Sonyal	Percolation Tank	75.4532	17.1736
92	Sangli	Jath	Suslad	Percolation Tank	75.6286	17.227
93	Sangli	Jath	Suslad	Percolation Tank	75.6289	17.2216
94	Sangli	Jath	Suslad	Percolation Tank	75.635	17.2017
95	Sangli	Jath	Suslad	Percolation Tank	75.6465	17.2083
96	Sangli	Jath	Suslad	Percolation Tank	75.6559	17.2184
97	Sangli	Jath	Umadi	Percolation Tank	75.565	17.2149
98	Sangli	Jath	Umadi	Percolation Tank	75.5696	17.278
99	Sangli	Jath	Umadi	Percolation Tank	75.5488	17.2664

100	Sangli	Jath	Umadi	Percolation Tank	75.5406	17.2539
101	Sangli	Jath	Umadi	Percolation Tank	75.5991	17.2181
102	Sangli	Jath	Utagi	Percolation Tank	75.4888	17.1747
103	Sangli	Jath	Utagi	Percolation Tank	75.4771	17.2134
104	Sangli	Jath	Utagi	Percolation Tank	75.5028	17.1557
105	Sangli	Jath	Utagi	Percolation Tank	75.5202	17.1576
106	Sangli	Jath	Utagi	Percolation Tank	75.5125	17.1746
107	Sangli	Jath	Utagi	Percolation Tank	75.5189	17.1741
108	Sangli	Jath	Utagi	Percolation Tank	75.5113	17.1577
109	Sangli	Jath	Utagi	Percolation Tank	75.4949	17.1878
110	Sangli	Jath	Utagi	Percolation Tank	75.5206	17.1916
111	Sangli	Jath	Utagi	Percolation Tank	75.5247	17.1958
112	Sangli	Jath	Utagi	Percolation Tank	75.5386	17.1939
113	Sangli	Jath	Utagi	Percolation Tank	75.5516	17.2002
114	Sangli	Jath	Utagi	Percolation Tank	75.5018	17.2151
115	Sangli	Jath	Utagi	Percolation Tank	75.5067	17.2164
116	Sangli	Jath	Utagi	Percolation Tank	75.5414	17.2019
117	Sangli	Jath	Utagi	Percolation Tank	75.5556	17.1987
118	Sangli	Jath	Utagi	Percolation Tank	75.5242	17.1796
119	Sangli	Jath	Utagi	Percolation Tank	75.5263	17.1738
120	Sangli	Jath	Utagi	Percolation Tank	75.5336	17.1775
121	Sangli	Jath	Utagi	Percolation Tank	75.5389	17.1706
122	Sangli	Jath	Utagi	Percolation Tank	75.5389	17.1681
123	Sangli	Jath	Utagi	Percolation Tank	75.5347	17.157
124	Sangli	Jath	Utagi	Percolation Tank	75.5282	17.1606

125	Sangli	Kadegaon	Apsinge	Percolation Tank	74.2693	17.2758
126	Sangli	Kadegaon	Kotawade	Percolation Tank	74.2734	17.2639
127	Sangli	Kadegaon	Kotawade	Percolation Tank	74.2815	17.2557
128	Sangli	Kadegaon	Shirasgaon	Percolation Tank	74.3055	17.2279
129	Sangli	Kadegaon	Sonsal	Percolation Tank	74.2917	17.2189
130	Sangli	Kadegaon	Tadsar	Percolation Tank	74.3117	17.2463
131	Sangli	Kadegaon	Tadsar	Percolation Tank	74.3319	17.243
132	Sangli	Kavthe Mahankal	Agalgaon	Percolation Tank	74.8895	17.0797
133	Sangli	Kavthe Mahankal	Alkud (M)	Percolation Tank	74.7628	16.9793
134	Sangli	Kavthe Mahankal	Chorochoi	Percolation Tank	75.0277	17.148
135	Sangli	Kavthe Mahankal	Chudekhindi	Percolation Tank	75.0186	17.1183
136	Sangli	Kavthe Mahankal	Chudekhindi	Percolation Tank	75.0323	17.115
137	Sangli	Kavthe Mahankal	Chudekhindi	Percolation Tank	75.0383	17.1166
138	Sangli	Kavthe Mahankal	Dhalgaon	Percolation Tank	74.9965	17.117
139	Sangli	Kavthe Mahankal	Dhalgaon	Percolation Tank	75.0067	17.1171
140	Sangli	Kavthe Mahankal	Dhalgaon	Percolation Tank	75.0076	17.1221
141	Sangli	Kavthe Mahankal	Dhalgaon	Percolation Tank	74.9904	17.1264
142	Sangli	Kavthe Mahankal	Dhalgaon	Percolation Tank	74.9945	17.1327
143	Sangli	Kavthe Mahankal	Dhalgaon	Percolation Tank	74.9962	17.1382
144	Sangli	Kavthe Mahankal	Garjewadi (N.V)	Percolation Tank	74.8709	17.126
145	Sangli	Kavthe Mahankal	Ghatnandre	Percolation Tank	74.8629	17.18
146	Sangli	Kavthe Mahankal	Ghatnandre	Percolation Tank	74.8737	17.169
147	Sangli	Kavthe Mahankal	Jakhapur	Percolation Tank	74.8586	17.0844
148	Sangli	Kavthe Mahankal	Jakhapur	Percolation Tank	74.8738	17.0915
149	Sangli	Kavthe Mahankal	Kerewadi	Percolation Tank	74.9327	17.1218

150	Sangli	Kavthe Mahankal	Kundlapur	Percolation Tank	74.8725	17.1165
151	Sangli	Kavthe Mahankal	Landge Wadi	Percolation Tank	74.8312	17.0258
152	Sangli	Kavthe Mahankal	Landge Wadi	Percolation Tank	74.8316	17.0145
153	Sangli	Kavthe Mahankal	Shelkewadi	Percolation Tank	74.9028	17.1168
154	Sangli	Kavthe Mahankal	Shirdhon	Percolation Tank	74.8108	17.0314
155	Sangli	Kavthe Mahankal	Tisangi	Percolation Tank	74.8571	17.1466
156	Sangli	Kavthe Mahankal	Tisangi	Percolation Tank	74.858	17.1608
157	Sangli	Kavthe Mahankal	Tisangi	Percolation Tank	74.8669	17.1589
158	Sangli	Khanapur	Ainwadi	Percolation Tank	74.6629	17.2885
159	Sangli	Khanapur	Ainwadi	Percolation Tank	74.6847	17.2795
160	Sangli	Khanapur	Bhadake Wadi	Percolation Tank	74.7019	17.2179
161	Sangli	Khanapur	Ghoti Bk.	Percolation Tank	74.645	17.2425
162	Sangli	Khanapur	Ghoti Bk.	Percolation Tank	74.6316	17.2311
163	Sangli	Khanapur	Ghoti Kh.	Percolation Tank	74.6397	17.25
164	Sangli	Khanapur	Jadhav Wadi	Percolation Tank	74.6691	17.2941
165	Sangli	Khanapur	Jadhav Wadi	Percolation Tank	74.6782	17.2915
166	Sangli	Khanapur	Karanje	Percolation Tank	74.7435	17.2233
167	Sangli	Khanapur	Khanapur	Percolation Tank	74.7029	17.2662
168	Sangli	Khanapur	Lengare	Percolation Tank	74.6416	17.3087
169	Sangli	Khanapur	Lengare	Percolation Tank	74.6477	17.3059
170	Sangli	Khanapur	Mohi	Percolation Tank	74.7207	17.2247
171	Sangli	Khanapur	Mohi	Percolation Tank	74.7157	17.238
172	Sangli	Khanapur	Para	Percolation Tank	74.6256	17.2286
173	Sangli	Khanapur	Para	Percolation Tank	74.6031	17.2221
174	Sangli	Khanapur	Para	Percolation Tank	74.6058	17.2202

175	Sangli	Khanapur	Para	Percolation Tank	74.5936	17.2278
176	Sangli	Khanapur	Posewadi	Percolation Tank	74.6857	17.2612
177	Sangli	Khanapur	Renavi	Percolation Tank	74.619	17.2963
178	Sangli	Khanapur	Renavi	Percolation Tank	74.6265	17.2913
179	Sangli	Khanapur	Renavi	Percolation Tank	74.631	17.2831
180	Sangli	Khanapur	Renavi	Percolation Tank	74.629	17.2668
181	Sangli	Khanapur	Renavi	Percolation Tank	74.6229	17.2564
182	Sangli	Khanapur	Rewangaon	Percolation Tank	74.6483	17.2679
183	Sangli	Khanapur	Rewangaon	Percolation Tank	74.6433	17.2739
184	Sangli	Miraj	Kalambi	Percolation Tank	74.6893	16.8997
185	Sangli	Miraj	Kharkatwadi	Percolation Tank	74.6786	16.9139
186	Sangli	Miraj	Malgaon	Percolation Tank	74.6927	16.889
187	Sangli	Miraj	Malgaon	Percolation Tank	74.72	16.8832
188	Sangli	Miraj	Malgaon	Percolation Tank	74.7428	16.8933
189	Sangli	Tasgaon	Hatnoor	Percolation Tank	74.6329	17.1746
190	Sangli	Tasgaon	Hatnoor	Percolation Tank	74.6431	17.1659
191	Sangli	Tasgaon	Ped	Percolation Tank	74.6563	17.1996